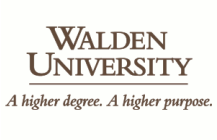

2019

The Effect of Mindfulness Techniques on Teacher Resilience as Moderated by Conscientiousness

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
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Abstract

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Dissertation Submitted in Partial Fulfillment

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Doctor of Philosophy

Industrial/Organizational Psychology

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Abstract

Unmanaged stress in teachers often triggers burnout, which leads to a rise in healthcare costs and absenteeism. Therefore, teachers' resiliency needs improvement to lower the risk of burnout. The purpose of this cross-sectional design study was to examine the relationship between mindfulness techniques and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderates the relationship between mindfulness techniques and resilience. The frameworks for this study were based on the self-awareness, -regulation, and -transcendence (S-ART) framework, theory of planned behavior, and the concepts of resilience and job burnout. Four surveys were used to gather data from 133 high school teachers to understand the relationship between mindfulness techniques and resilience as well as how conscientiousness moderates the relationship. Multiple regression analysis was used to analyze the data. This study found a significant relationship between mindfulness techniques and resilience in high school teachers. Additionally, this study found that conscientiousness does not significantly moderate the relationship between mindfulness techniques and resilience in high school teachers. The results of this study might be used to create a professional development tool for teachers to help them learn how to increase the quality of classroom interactions. The outcome may be a more positive social, academic environment for students as well as teachers, based on the encouraged use of mindfulness techniques.

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Dedication

This dissertation is dedicated to my mother, Pearlie R. Harris. Thanks for being supportive through your prayers and encouragement. At the most challenging times of this process, you listened and encouraged me. I am forever grateful of your love! I also dedicate this dissertation to my sister, Joan Harris Allen; my nephew, Damien D. Harris; and niece, Alexis S. Allen. I encourage each of you to continue to search after who God created you to be and live in it.

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Chapter 1: Introduction to the Study

Introduction

Every year in the United States, the teacher turnover rate is about 8% (Westervelt, 2016). In the nation, 2.2 billion dollars is spent annually on teacher turnover (Alliance for Excellence Education, 2014). In October 2013, New Mexico ranked nationally as the second highest in teacher turnover (Nott, 2016). These turnovers seem to be the result of burnout, which often leads to stress resulting in increased healthcare costs and absenteeism (Jennings et al., 2017; Roeser, Skinner, Beers, & Jennings, 2012). Burnout is a continuing factor among teachers that needs resolution (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; McCarthy, Lambert, O'Donnell, & Melendres, 2009; McCormick & Barnett, 2011). The learning environment is essential to the success of education for students. Often, the learning environment can be stressful for both the teacher and student (Roeser et al., 2012).

Improving teachers' resiliency tends to lower the risk of burnout (Kemper, Mo, & Khayat, 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson, Kemper, & Mahan, 2015). Increasing the resiliency levels of teachers may decrease the problem of burnout that leads to high teacher turnover. Researchers showed that mindfulness lowers the risk of burnout and improves resilience (Aikens et al., 2014; Flook et al., 2013; Olson et al., 2015). Also, conscientiousness plays a role in stress management (Giluk, 2009), which can result in teachers being more practical in their profession.

The results of this study have the potential to provide positive social change for teachers and students. Teachers would have tools to help them learn how to improve

resilience levels, decrease the risk of burnout, manage stress, and increase the quality of classroom interactions. The academic environment would grow because of teachers using mindfulness techniques, improving the quality of education for students.

In this chapter, I address the background of burnout and stress attributed to teacher turnover rate and mindfulness as a tool for reducing burnout and increasing resilience. A description of the problems with increased health care costs and absenteeism, quality of education, and the need for teachers' resiliency to be improved is discussed in the problem statement. An explanation of the purpose of this study is provided. The theoretical foundation was based on self-awareness, self-regulation, and self-transcendence (S-ART) framework, theory of planned behavior, and the concepts of resilience and job burnout. A discussion of the statistical design, scope, and limitations is provided. This chapter concludes with a clarification of the significance of the study and its contribution to scholarly research.

Background of the Study

Research about the relationship between mindfulness, resilience, and conscientiousness has been reviewed and will be discussed in this section. Jennings et al. (2017) and Roeser et al. (2013) suggested the use of mindfulness as a tool in professional development for teachers to help with burnout and classroom management. Jennings et al. found mindfulness to be a stress reducer and promoter of self-awareness and self-regulation with elementary teachers. Because burnout stems from stress, mindfulness being shown to reduce stress was essential in this study. Davis and Bjornberg (2015) and Marianetti and Passmore (2012) provided information about the importance of

mindfulness to positive psychology and industrial and organizational psychology theory and practice. Mindfulness should be used in the workplace as a tool for improving wellbeing (Davis & Bjornberg, 2015; Marianetti & Passmore, 2012). Flook et al. (2013) assessed mindfulness with elementary school teachers and addressed the need for additional empirical research. The additional research needed involves the use of mindfulness as a professional development tool for teachers. Castille, Sawyer, Thoroughgood, and Buckner (2015); Hülsheger, Alberts, Feinholdt, and Lang (2013); Hunter and McCormick (2008); Jennings et al. (2017); Saks and Gruman (2015); and Yeganeh & Good (2016) suggested that mindfulness relates to helping teachers through challenging work conditions and resolving performance matters. Jennings et al. (2017) and Morello (2014) suggested that the increase in teacher turnover has increased the cost to school districts. These costs consisted of recruiting, hiring process, and training new teachers.

Morello (2014) addressed the rise in turnover by teachers. Jennings et al. (2017) attributed the rise in turnover by teachers to the dissatisfaction of teachers with their working conditions and increase in burnout because of stress. Scholars have discussed the connection between mindfulness and resilience (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson et al., 2015). Meiklejohn et al. (2012) claimed that the evolving of the resilience of teachers with mindfulness helps to create collaboration in the classroom. There is a positive connection with mindfulness and conscientiousness (Crescentini & Capurso, 2015; Latzman & Masuda, 2013; Lee & Bowen, 2014; Siegling & Petrides, 2014). Hanley (2016) examined the relationship

between mindfulness and the Big Five Personality Traits. More research is needed about the relationship between mindfulness and the Big Five Personality Traits with a more diverse population. Therefore, the high school teacher population was chosen to perform this research.

Problem Statement

The teacher turnover rate is steadily increasing and seems to be attributed to teachers not being satisfied with working conditions and the increase in burnout (Jennings et al., 2017; Morello, 2014; Roeser et al., 2013). In the education field, teachers are the driving force in the learning provided to students. The wellbeing of students is nurtured by teachers (Flook et al., 2013), and sometimes the learning environment can be stressful for teachers to manage. The burnout in teachers often leads to stress that results in increased healthcare costs, absenteeism, and turnover (Jennings et al., 2017; Roeser et al., 2012). Burnout continues to be encountered by teachers in the education field (Flook et al., 2013; McCarthy et al., 2009; McCormick & Barnett, 2011). Education quality suffers because of the increase of burnout in teachers that affect the stress levels of students (Roeser et al., 2012).

Mindfulness and resilience are connected (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson et al., 2015). According to Olson et al. (2015), the characteristic of mindfulness aids in the wellbeing of individuals. Olson et al. showed that mindfulness relates to a decrease in burnout and increased resilience that is provided as a protecting influence against burnout and stress. Kemper et al. (2015) showed that resilience is negatively correlated to burnout and positively correlated to mindfulness.

Meiklejohn et al. (2012) proposed that developing the resiliency of teachers with mindfulness practices creates a personal interaction in the classroom and offers students an opportunity to develop mindfulness skills to establish their resiliency.

Conscientiousness has a positive and strong relationship with mindfulness (Crescentini, & Capurso, 2015; Latzman & Masuda, 2013; Lee & Bowen, 2014; Siegling & Petrides, 2014). Sesker, Súilleabháin, Howard, and Hughes (2016) suggested that conscientiousness and mindfulness may predict problem-focused coping behavior. Sesker et al. found that conscientiousness and mindfulness contribute to coping responses in healthy ways. However, because of the narrow view of mindfulness being measured by Midlife Development in the United States II (MIDUS II), there is a need for further explanation of the role of mindfulness with conscientiousness with a more rigorous measure.

The most common Big Five Personality Trait studied with mindfulness has been neuroticism (Giluk, 2009; Spinhoven, Huijbers, Zheng, Ormel, & Speckens, 2017). Although conscientiousness has a relationship to mindfulness, it is often overlooked and should be considered (Giluk, 2009). Giluk (2009) suggested that conscientiousness might not be looked upon as a "natural theoretical relationship" with mindfulness as the other personality traits. However, Giluk found that conscientiousness has a positive and strong correlation with mindfulness.

As the research about mindfulness extends into the workplace, the relationship between mindfulness and conscientiousness should be examined (Giluk, 2009; Hanley, 2016). Personality has been discovered as a moderating variable between mindfulness

and empathy (Winning & Boag, 2015). Sesker et al. (2016) demonstrated that mindfulness and conscientiousness could forecast problem-focused coping behavior. Sesker et al. indicated personality as a predictor for coping. Further explanation is needed to expand on the role of mindfulness, conscientiousness, and stress resilience because each has a positive relationship to coping behavior (Sesker et al., 2016). More research is necessary to increase the knowledge about the relationship of conscientiousness and resilience (Sesker et al., 2016). Hanley (2016) conducted a study about the association of mindfulness with the Big Five Personality Traits with primary females. Further research is needed to examine this relationship in more diverse populations (Sesker et al., 2016).

The specific problem to be addressed with this research was that burnout is a continuous factor among teachers, and teachers may benefit from improved resiliency to lower the risk of burnout (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson et al., 2015). Hyland, Lee, and Mills (2015) recommended examining antecedents, consequences, mediators, and moderators connected with mindfulness. Hyland et al. also suggested the need for understanding the interaction of mindfulness with various individual difference variables, including personality traits, temperaments, and mental models. Tomac (2011) mentioned there should be an examination of those who have experience in mindfulness practices and how the use of mindfulness increases resilience. Aikens et al. (2014) suggested that using mindfulness techniques improves resiliency.

Although the technique of mindfulness has history within the field of industrial and organizational psychology, there are many benefits to the use of mindfulness in the

workplace (Aikens et al., 2014; Flook et al., 2013; Jennings et al., 2017). Flook et al. (2013) suggested that mindfulness supports the decrease in burnout due to stress and increases cognitive function and performance improvement. Mindfulness reduces emotional tiredness and improves job satisfaction (Flook et al., 2013; Hülsheger et al., 2013). Mindfulness techniques, along with high levels of conscientiousness and resilience, may help teachers lower the risk of burnout and be better equipped to deal with the demands of their profession.

Purpose of the Study

The purpose of this quantitative study using multiple regression analysis was to examine the relationship between mindfulness techniques and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderates the relationship between the use of mindfulness techniques and resilience in high school teachers. The predictor variable was mindfulness, the outcome variable was resilience, and the moderating variable was conscientiousness.

Research Questions and Hypotheses

Two research questions guided this study:

RQ1: What is the relationship between using mindfulness techniques and resilience in high school teachers?

$H1_0$: Among high school teachers, mindfulness, as measured by the Five-Facet Mindfulness Questionnaire (FFMQ), does not significantly predict resilience, as measured by the Connor-Davidson Resilience Scale (CD-RISC).

$H1_1$: Among high school teachers, mindfulness, as measured by the FFMQ, significantly predicts resilience, as measured by the CD-RISC.

RQ2: How does conscientiousness moderate the relationship between using mindfulness techniques and resilience in high school teachers?

$H2_0$: Among high school teachers, conscientiousness, as measured by the Big Five Aspects Scale: Conscientiousness (BFAS: Conscientiousness), does not significantly moderate the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

$H2_1$: Among high school teachers, conscientiousness, as measured by the UFFM-I Conscientiousness Scale, significantly moderates the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

Theoretical Framework

The theoretical foundation for this study was S-ART framework (Vago & Silbersweig, 2012). According to the S-ART framework, mindfulness aids in individuals' development of self-awareness, behavior management, and doing things for the benefit of other people (Vago & Silbersweig, 2012). Vago and Silbersweig (2012) indicated that the S-ART framework has six factors that sustain mindfulness. These factors are "intention and motivation, attention regulation, emotion regulation, memory extinction and reconsolidation, Prosociality, and non-attachment and de-centering" (Vago & Silbersweig, 2012, p. 15).

According to the S-ART framework, mindfulness techniques lessen preconceptions that relate to self-processing and promoting wellbeing (Vago, 2014; Vago & Silbersweig, 2012). Mindfulness denotes a series of mental activity supported by meditation approaches (Vago, 2014; Vago & Silbersweig, 2012). The S-ART framework is a plan for self-awareness enhancement about an individual's routine of thought and actions as it relates to other people (Vago, 2014; Vago & Silbersweig, 2012). As applied to this study, according to the S-ART framework, I expected that the predictor variable, mindfulness, predicted the outcome variable, resilience levels.

The concept of resilience was a theoretical basis for this study. Ledesma (2014) defined resilience as being able to "bounce back" from stressful situations. The concepts of survival, recovery, and thriving relate to the concept of resilience (Ledesma, 2014; Thompson, Arnkoff, & Glass, 2011). Resilience incorporates the significance of competence with intervention while decreasing the effects of adverse situations (Yates & Masten, 2004). Individuals who were exposed to difficulty were able to attain positive progressive results (Yates & Masten, 2004). Resilience is established upon an individual's contact with challenges and ability to achieve favorable results (Thompson et al., 2011; Yates & Masten, 2004). Mindfulness has been shown to promote resilience within individuals during adversity (Thompson et al., 2011).

The theory of planned behavior (TPB) also supported this research as a theory of behavior where other influences affect action (Ajzen, 1985; Chatzisarantis & Hagger, 2007). Based on social cognition, TPB gives clarity as to how thoughtful decisions affect an individual's performance (Chatzisarantis & Hagger, 2007; Ouellette & Wood, 1998).

According to TPB, habit is a higher expectation of social behavior as opposed to intentions (Chatzisarantis & Hagger, 2007; Ouellette & Wood, 1998). Ajzen (1985) suggested that an individual's intentions are an image of his or her attitudes about an action, personal standards, and apparent social control. Therefore, individuals have an intentional motivation for their behavior (Ajzen, 1985; Chatzisarantis & Hagger, 2007; Ouellette & Wood, 1998). Yates and Masten (2004) suggested that the presence of conscientiousness facilitates the outcome of prior behavior on intention and behavior.

According to job burnout, burnout is an emotional exhaustion that results in the diminishing of service provided to others (Maslach, 1998; Maslach, Schaufeli, & Leiter, 2001; Schaufeli, Maslach, & Marek, 1993). Job burnout focuses on an individual's engagement in his or her work environment (Maslach et al., 2001). People-oriented professions most often experience burnout, which is a threat to their occupation (Maslach, 1998; Maslach et al., 2001). Burnout tends to lessen an individual's operation – both personal and social (Maslach, 1998). Therefore, the goal is to improve an individual's ability to manage stress from the demands of the workplace to lower the risk of burnout (Maslach et al., 2001).

Nature of Study

The purpose of this quantitative study was to examine the relationship between variables by using multiple regression analysis. An additional purpose was to examine the effect that conscientiousness has on the relationship between mindfulness and resilience of high school teachers. The predictor variable, mindfulness, was measured by the FFMQ, which has the following factors: observing, describing, acting with

awareness, nonjudging of inner experiences, and nonreactivity to inner experiences (Williams, Dalgleish, Karl, & Kuyken, 2014). The outcome variable, resilience, was measured by the CD-RISC. Conscientiousness was measured by the BFAS: Conscientiousness.

This study was a correlational design using questionnaires to gather data from the sample of the population for this study. Quantitative studies are used to obtain numerical data of a population's attitudes, views, or tendencies by studying a sample from it (Vogt, 2011). I used multiple correlation coefficient statistics to indicate how the predictor variable (mindfulness) will predict the outcome variable (resilience). Further, I used regression coefficients to indicate the relationships between each predictor variables and the outcome variables. I chose to use multiple regression due to the multiple predictor variables and moderating variables.

Definition of Key Terms

Burnout: The presence of continual job stress that causes emotional fatigue and refers to a psychological condition of depersonalization and reduced personal success that can happen with individuals who are service providers (Maslach, 1998; Maslach et al., 2001; Schaufeli et al., 1993).

Conscientiousness: A personality trait that identifies an individual's will to achieve and discipline to accomplish goals (Digman, 1990; George & Zhou, 2001; Roberts, Lejuez, Krueger, Richards, & Hill, 2014). It has the characteristics of hardworking, success focused, and persistence in the face of adversity (Barrick & Mount, 1991).

Mindfulness: Experiencing the now on purpose without putting a name to it or making a decision about it (Kabat-Zinn, 2012).

Resilience: The ability to cope with stress in a successful manner (Campbell-Sills & Stein, 2007).

Teacher resilience: The ability of teachers to endure environmental stressors and maintain their teaching obligation (Mansfield, Beltman, Price, & McConney, 2012).

Assumptions of the Study

It was assumed that high school teachers completing the surveys had experienced burnout. An assumption was also made about the high school teachers' knowledge of mindfulness. Another assumption was that these high school teachers had a desire to increase resilience levels to decrease their risk of burnout. Additionally, it was assumed that high school teachers completing the surveys wanted to improve classroom management. It was assumed that the test instruments selected for this study were reliable and valid in measuring burnout, mindfulness, resilience, and conscientiousness. Also, there was an assumption that the S-ART framework was an appropriate framework for this study.

Multiple regression analysis involves assumptions that variables are normally distributed, measured without error, and have a linear relationship. Additionally, multiple regression analysis assumes that multicollinearity is not present, and homoscedasticity is present. A final assumption was that all survey participants would provide honest responses. There were a series tests conducted to address the assumptions of variables used in multiple regression (Osborne & Waters, 2002). The purpose of the tests was to

understand if the data conforms to parameters to be appropriately analyzed with multiple regression (Osborne & Waters, 2002). The tests of assumptions helped to avoid Type I and II errors and increase significance or effect sizes (Osborne & Waters, 2002). The surveys of this study that did not have a defined 0 were labeled as ordinal and, therefore, were accepted as a limitation (Osborne & Waters, 2002).

Scope and Delimitations

The scope of this study involved high school teachers. The population of high school teachers was chosen because of the teacher turnover rate. I focused on the examination of the relationship between mindfulness and resilience in high school teachers. I used voluntary research participants by using the survey method design. The findings of this study are generalized to the extent that the sample was a representation of the population. High school administration, counselors, and custodians were not included as their professional responsibilities differ from teachers.

Limitations of the Study

There were a few limitations considered for this study. As this study was based on a volunteer basis, individuals who volunteered to participate may be different from those who did not. Restricting this study to one group of teachers placed limits on the generalization of the results. The results are generalized to high school teachers. A limitation of using the multiple regression analysis was that the causal mechanism was not considered (Laerd Statistics, 2015).

Significance of the Study

There is little known about the association between mindfulness and the Big Five Personality Traits. The information that is available is mostly about mindfulness and neuroticism. There is no direct evidence that the personality trait, conscientiousness, is a moderating variable of mindfulness outcomes. Conscientiousness and mindfulness have a natural relationship with managing stress (Giluk, 2009). The conscientiousness-mindfulness relationship produces an intentional response as opposed to reacting to work demands or environment. Having a high level of conscientiousness with the use of mindfulness techniques may help teachers be more proactive at work.

There is a need for more empirical studies about mindfulness as a form of professional development for teachers. Roeser et al. (2012) suggested that training programs for teachers should include mindfulness tools to help them efficiently prepare for the workplace demands. In this study, I expand on the literature in the industrial/organizational psychology field about the benefits of mindfulness, conscientiousness, and resilience among teachers. I addressed the conscientiousness level that teachers need to benefit from the use of mindfulness to manage their resilience levels. The relationship between mindfulness, conscientiousness, and resilience about burnout could be areas for establishing the foundation of teacher professional development programs (Olson et al., 2015). The results gained from this study could provide insight on the use of mindfulness techniques as a method for professional development to help teachers with decreasing burnout and improving classroom management (Flook et al., 2013; Roeser et al., 2012).

The teaching profession is recognized as a human service occupation that demonstrates the need for a "habit of mind" – mindfulness (Roeser et al., 2012). In the teaching profession, there are various levels of "uncertainty, emotion, and attention" that requests the presence of mindfulness (Roeser et al., 2012, p. 168). Teachers are more prone to experiencing burnout if they view the demands they encounter, and the means for dealing with them, are not in sync (McCarthy et al., 2009). The development of mindfulness provides the opportunity for teachers to be equipped to manage the demands of their profession (Roeser et al., 2012). Making mindfulness known to teachers presents the opportunity to improve their wellbeing and job retention (Bernay, 2014). To respond to teachers' burnout, the development of resilience is suggested along with the practice of mindfulness (Kemper et al., 2015; Meiklejohn et al., 2012).

Implications for social change could be shown at individual, group, and organization levels. With the constant use of mindfulness techniques, teachers may experience an increase in awareness (Hunter & McCormick, 2008), improvement in mental and physical health, as well as an improvement in work performance (Hülsheger et al., 2013). The learning environment for education is essential. The use of mindfulness as a professional development tool for teachers may help them to learn how to increase the quality of classroom interactions. As teachers lower their risk of burnout, the costs associated with their absenteeism, turnover, and health care may reduce. The outcome may be a positive social, academic environment for students as well as teachers.

Summary

Across the United States, the teacher turnover rate continues to rise. Burnout is most often the cause of the high turnover rate among teachers leading to high healthcare costs and absenteeism (Jennings et al., 2017; Roeser et al., 2012). The matter of burnout needs to be rectified so that the educational environment is conducive to success (Flook et al., 2013; McCarthy et al., 2009; McCormick & Barnett, 2011). Improving teachers' resilience levels should be undertaken to correct burnout (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson et al., 2015). Mindfulness has been shown to decrease the risk of burnout while improving resilience (Aikens et al., 2014; Flook et al., 2013; Olson et al., 2015). Additionally, conscientiousness has a role in managing stress (Giluk, 2009).

In this chapter, I addressed the background of burnout, stress, mindfulness, and conscientiousness. The problem of this study was discussed along with the purpose and nature. An overview of the theoretical foundation was provided as well as the questions developed to guide the study. A look at the statistical design, scope, and limitations was provided. Lastly, the significance of this study and contribution to scholarly work was indicated.

In Chapter 2, I explored the literature that supports this study. In Chapter 3, I discussed the methodology for this study. In Chapter 4, I explained the results of this study, and in Chapter 5, I provided recommendations based on the findings of this study.

Chapter 2: Literature Review

Introduction

A need exists to improve teachers' resilience to lower their risk of burnout (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson et al., 2015). An increase of burnout among teachers has increased and has resulted in a high turnover rate (Jennings et al., 2017; Morello, 2014; Roeser et al., 2013). Because of the increase in burnout, an increase in absenteeism and costs have been associated with healthcare (Jennings et al., 2017; Roeser et al., 2012). The burnout encountered by teachers results in a decline in the quality of education and stressed students (Roeser et al., 2012). To address this problem, the use of mindfulness with high conscientiousness and resilience levels may help teachers decrease their risk for burnout. Also, teachers might be better prepared to deal with demands of their profession with encouraged use of mindfulness techniques.

Scholars have connected mindfulness with resilience (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; Olson et al., 2015). Various researchers have related the use of mindfulness to a decline in burnout and a rise in resilience (Olson et al., 2015). Conscientiousness is positively related to mindfulness (Crescentini & Capurso, 2015; Latzman & Masuda, 2013; Lee & Bowen, 2014; Siegling & Petrides, 2014). The purpose of this study was to examine the relationship between mindfulness techniques and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderated the relationship between mindfulness and resilience in high school teachers.

Sesker et al. (2016) and Winning and Boag (2015) suggested that personality traits have been shown to be moderating variables. Personality traits have been shown to influence an individual's coping skills with work-related stress (Sesker et al., 2016). As a moderating variable, personality traits can modify an individual's behavior (Barrick & Mount, 1991). Personality traits are internal attributes that instill resilience in individuals (Barrick & Mount, 1991). Different individuals have different levels of conscientiousness, which may affect their mindfulness. For instance, an individual with high levels of conscientiousness demonstrates better stress resilience than those with low levels of conscientiousness (Giluk, 2009; Sesker et al., 2016).

The subsequent literature review starts with the theoretical foundation used to ground this study. Also discussed are the variables and concepts that are related to this study. Additionally, the findings of several studies explaining the relationship between mindfulness, resilience, and conscientiousness are identified.

Literature Search Strategy

The literature review began with a comprehensive search of library databases that are available to students within the Walden University Library. The search started with electronic data searches to classify and locate articles relating to various features that contain the phenomenon of *mindfulness*. In addition to searching for the term mindfulness, a search for other concepts included *burnout*, *stress, personality traits, teachers, workplace, resilience, conscientiousness, organizations,* and *wellbeing* and any articles that related to the relationship between mindfulness and teachers.

Initially, the searches were set for a publication period of 2011 to 2016 to locate recent relevant studies. More material was gathered from additional libraries primarily using psychological and educational databases. These databases included the following: psychINFO, psychARTICLES, Academic Search Complete, SAGE Premier, and Expanded Academics (*teachers and mindfulness; teachers and mindfulness and resilience; mindfulness and conscientiousness; mindfulness and resilience; mindfulness and resilience and conscientiousness; resilience and conscientiousness*), ProQuest Central (*mindfulness and conscientiousness and resilience*), Thoreau Multi Databases (*teachers and mindfulness; teachers and conscientiousness; teachers and resilience; teachers and mindfulness and resilience; resilience and conscientiousness; mindfulness and conscientiousness; mindfulness and resilience; mindfulness and resilience and conscientiousness*), and Google Scholar (*teachers and mindfulness; mindfulness and stress and resilience; mindfulness and stress and resilience and teachers; mindfulness and resilience and conscientiousness; mindfulness and resilience and conscientiousness and teachers*).

Theoretical Foundation

S-ART Framework

The theoretical foundation in support of the predictor variable, mindfulness, for this study was grounded in the S-ART framework. Vago and Silbersweig (2012) introduced the S-ART framework as providing a foundation that assimilates the traditional Buddhist and contemporary models of mindfulness. The S-ART framework is a neurobiological model that suggests that the awareness, thoughts, and feelings that

relate to everyday experiences can be partial or prejudice to variable degrees (Vago & Silbersweig, 2012). Individuals have the potential to be biased about their self. Vago and Silbersweig explained how mindfulness decreases biases linked to self-processing. According to the S-ART framework, the concept of mindfulness is a comprehensive way to develop many skills that lead to reducing self-processing prejudices to create a sustainable, healthy mind, and awareness (Good et al., 2016; Purser & Milillo, 2015). Mindfulness is a tool that individuals might use to help them be less bias about self and more aware of their wellbeing.

There are steps an individual should take to reduce his or her self-biases. Self-biases are reduced through mental exercises that develop self-awareness, behavior management, and doing things for the sake of others (Vago & Silbersweig, 2012). The core practices of the S-ART framework are focused attention (FA) and open monitoring (OM) otherwise known as insight (Lippelt, Hommel, & Colzato, 2014; Vago & Silbersweig, 2012). Kabat-Zinn (2012) specified these practices as mindfulness meditation. Vago and Silbersweig (2012) discussed that the mutual connection between the historical and contemporary models of mindfulness is the component of suffering and partial or prejudice self-perception, bond with others, events, and the external world. In the S-ART framework, mindfulness will influence levels of resiliency (Vago & Silbersweig, 2012). The use of mindfulness techniques might be most beneficial as the way to reduce burnout and encourage wellness among teachers as well as encouraging self-awareness and self-regulation (Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Vago & Silbersweig, 2012). The S-ART framework relates to the research

questions of this study as a foundation for the concept of mindfulness. The S-ART framework provides an operational definition of mindfulness to examine resilience and conscientiousness.

Resilience

For this study, I used the concept of resilience to support the outcome variable, resilience. The concept of resilience originated by Yates and Masten (2004) from case studies of natural observations of developing at-risk youth. The resilience concept was used to endorse wellness and competence (Richardson, 2002). Campbell-Sills and Stein (2007), Montero-Marin et al. (2015), and Richardson (2002) identified strengths that an individual should use during adverse situations for growth as well as the qualities for assisting individuals to deal with life interruptions. Every individual has the potential to produce resilience through his or her qualities and strengths. Resilience is acknowledged as internal motivating energy that moves an individual towards self-actualization, selflessness, and assistance in coping with change or adversity (Campbell-Sills & Stein, 2007; Ledesma, 2014; Richardson, 2002). Resilience is an opportunity for individuals to deal with life challenges and produce satisfactory results.

Resilient individuals have an inborn moral framework or a natural love for others. The concept of resilience is used to illustrate how individuals should respond to life's challenges (Richardson, 2002). As a primary standard that humans have, resilience starts when an individual adapts to situations in life (Campbell-Sills & Stein, 2007; Ledesma, 2014; Richardson, 2002). When individuals trust the process of resilience, they place themselves in a position of control of their growth. The stressors of life and change

provide growth and increased resilient attributes (Campbell-Sills & Stein, 2007; Montero-Marin et al., 2015; Richardson, 2002). Resilience is a simple, practical tool for everyday living (Campbell-Sills & Stein, 2007; Ledesma, 2014) and some of these tools that can be used to access resilience are meditation, Tai Chai, prayer, and yoga (Richardson, 2002). Individuals can access and increase his or her resilience through tools.

There are many perspectives on the concept of resilience. The phenomenological view of resilience has changed from examining risk influences of psychosocial challenges to recognizing an individual's strong point (Benson, 1997). Resilient individuals have the distinct ability to help themselves endure adversity (Campbell-Sills & Stein, 2007; Richardson, 2002). Individuals who find themselves amid adverse situations can help themselves deal with it. Werner and Smith (1992) set the foundation for resilience. In a 30-year longitudinal study of a multiracial population of children, 72 of 200 children did fine in the face of adversity (Richardson, 2002). The characteristics that helped these children were "female, robust, socially responsible, adaptable, tolerant, achievement-oriented, a good communicator, and having good self-esteem" (Richardson, 2002, p. 309). Rutter (1979, 1985) discovered that children were resilient in the face of adversity. The resilient abilities described were "easy temperament, being female, a positive school climate, self-mastery, self-efficacy, planning skills, and a warm, close, personal relationship with an adult" (Richardson, 2002, p. 309). There are many attributes individuals have that help them to be resilient in challenging situations.

Theory of Planned Behavior

The TPB was also used to support this study. TPB is an addition to the theory of reasoned action (TRA). TRA determines the degree of control belief and perceived behavior control (Armitage & Conner, 2001; Orbeil, Hodgldns, & Sheeran, 1997). Orbeil et al. (1997) shared that the elements of the TPB are attitude toward the behavior, subjective norm regarding behavior, and perceived behavior control. The pressure that an individual receives from others of significant influences to either execute the behavior or not is considered his or her subjective norm about behavior (Orbeil et al., 1997). An individual can measure his or her attitude, be it positive or negative. The individual's awareness of his/her comfort or struggle of doing the behavior is seen as his or her perceived behavior control (Armitage & Conner, 2001; Orbeil et al., 1997). According to TBP, an individual's perception of his or her behavior is based on his or her intention or attitude about his or her behavior.

Ajzen (1985), Armitage and Conner (2001), and Orbeil et al. (1997) suggested that intentions are an overview of the cognitive and affective mechanisms where attitude, subjective norm, and perceived behavior control guide future behavior. When an individual has a right attitude about a behavior, encouragement from relative others and a strong awareness about the behavior, his or her intentions are greater for doing the behavior (Ajzen, 1985; Armitage & Conner, 2001). An individual's intention is the direct sign of his or her behavior. A person's standpoint about a behavior, observation of social pressure, and awareness of behavioral regulation result in the creation of a behavioral

intention (Armitage & Conner, 2001; Orbeil et al., 1997). Therefore, a person's intentions motivate his or her behavior.

Job Burnout

For the study, the concept of job burnout was used to provide support to burnout among teachers. Burnout is considered a condition of emotional fatigue, depersonalization, and condensed personal success that can happen among individuals who do public work of some kind (Maslach, 1998; Maslach et al., 2001; McCormick & Barnett, 2011; Schaufeli et al., 1993). Burnout was first identified as a social problem and later evolved to theoretical and empirical studies that dealt with the practicality of burnout (Maslach, 1998; Maslach et al., 2001; Schaufeli et al., 1993). The focus started with clinical labels and later moved towards the evaluation of the practical aspect of burnout (Maslach et al., 2001; Schaufeli et al., 1993). Maslach, Leiter, and Schaufeli (2008) and Schaufeli et al. (1993) described burnout as common during its first appearance in the mid-1970s. The focus of burnout arose in the education, medicine, social sciences, criminal justice, religion, mental health fields, and other people-oriented professions. Researchers shared that in the mid-1970s, Maslach was studying how individuals were managing emotional stimulation on the job (Leiter & Maslach, 2016; Maslach et al., 2008; Schaufeli et al., 1993). The problem of burnout has been prevalent for years in more than just teachers.

There is a scarcity of research on the concept of burnout. The scarceness of research on burnout is attributed to the interest of it by practitioners rather than academic scholars. Practitioners' primary concern is with intervention, how to solve a problem

rather than theory, or how to conceptualize it (Maslach et al., 2008; Schaufeli et al., 1993). During the 1980s, more empirical research of burnout occurred, and standard measures were developed, such as Maslach Burnout Inventory (MBI; Leiter & Maslach, 2016; Maslach et al., 2008; Schaufeli et al., 1993). The interest in burnout is evident in more than people-oriented professions. Burnout has been expanded to nonoccupational areas and other professions such as sports and political and the business worlds (Schaufeli et al., 1993). Leiter and Maslach (2016), Maslach et al. (2008), and Schaufeli et al. (1993) conducted studies on burnout that included correlational studies that collected subjective, self-report data during one period. Several of these studies were not grounded in a theoretical framework nor were their rationales clear for the selection of variables. Burnout could result in a decline in the quality of care or service provided and could be a reason for job turnover, absenteeism, and low morale (Leiter & Maslach, 2016; Maslach et al., 2008; Schaufeli et al., 1993). Burnout is viewed as continued job stress: burning out an individual's resources (Maslach, 1998; Maslach et al., 2001; Schaufeli et al., 1993). Burnout becomes a problem when the individual continues to allow work demands overwhelm him or her and not do anything about it.

Individuals in the people-oriented profession often experience burnout, which is damaging to them and their career. Maslach (1998) argued that burnout is an occupational hazard for professions focused on people, such as education, human services, and healthcare. Maslach reasoned that burnout could weaken an individual's personal and social functioning. Burnout has an impact on the quality of an individual's life. Burnout can also lead to the decline in quality of work and physical and

psychological health, which can be costly (Maslach, 1998). The development of the burnout model was from a grass-roots approach that was grounded in the realities of experiences rather than theory (Leiter & Maslach, 2016; Maslach, 1998; Maslach et al., 2001). Psychometric research led to the development of the MBI, which measures all three elements of burnout: emotional exhaustion, depersonalization, and personal accomplishments (Maslach, 1998; Maslach et al., 2001). The MBI is a standard tool made for theory-driven research (Maslach, 1998). The focus of studies to reduce burnout has been for educational intervention to improve the capacity of individuals to manage the workplace demands (Leiter & Maslach, 2016; Maslach et al., 2001; Maslach et al., 2008). Individuals can reduce their risk of burnout by managing the demands of their workplace.

Literature Review

Mindfulness Historical Overview

Meditation places an emphasis on improving awareness of breath, thoughts, and bodily processes. Buddhist meditation derived from a 2,600-year-old philosophical doctrine illustrated by Sakyamuni Buddha throughout India (Lomas, Medina, Ivtzan, Rupprecht, & Eiroa-Orosa, 2017; Marx & Jones, 2017; Shonin, Van Gordon, & Griffiths, 2014; Sipe & Eisendrath, 2012). Shonin et al. (2014) contended that contemporary mental health exercises often assimilate forms of Buddhist meditation known as concentrative meditation, insight meditation, and mindfulness meditation. The primary focus of meditation is as a tool for improving the mental health of individuals. In Buddhism, mindfulness is experienced only within the contextual of a collection of

corresponding practices and viewpoints (Shonin et al., 2014). There are many perceptions of mindfulness. However, the focal point is self-awareness.

Mindfulness meditation is being attentive to the present without reservation. Mindfulness meditation means having a relaxed cognizance of the present moment and receptive attention to present events and experience (Brown & Ryan, 2003; Kabat-Zinn, 2012; Marx & Jones, 2017; Napoli, 2004). Brown, Ryan, and Creswell (2007) contended that the concept of mindfulness is mostly rooted in Buddhist psychology but shares a theoretical association with philosophies, phenomenology, naturalism, and existentialism in advanced Western European beliefs, as well as transcendentalism and humanism in America. Brown et al. suggested that mindfulness is engrained in the necessary actions of consciousness – attention, and awareness. To be conscious is to be mindful whether realized or not.

During moments of adversity, mindfulness tools can help individuals act in calmness. Nhất Hạnh (1987) suggested that mindfulness is a vital part of the regulation of the breath to remain calm during adverse situations. Mindfulness is when an individual takes care of his or her consciousness by keeping it active to the moment (Nhất Hạnh, 1987). Mindfulness is not operating like a machine but keeping attentive, being aware and prepared to handle any given situation well. Mindfulness provides the opportunity for individuals to manage and rebuild his or her self. For one to build up attentiveness, mindfulness is the seed. Mindfulness is a life of awareness that releases an individual of inattentiveness and empowers attentiveness.

Access to the benefits of mindfulness should be provided to more people. John Kabat-Zinn, a longtime meditator who benefits from the practice of mindfulness, developed a program to provide access to these benefits to a much broader, non-Buddhist audience (Kabat-Zinn, 2012; Marx & Jones, 2017). Kabat-Zinn (2012) took traditional Buddhist mindfulness meditation, detached its religious features and introduced mindfulness as an individual's experience with the present moment on purpose without making any judgments about the experience (Hunter & McCormick, 2008; Kabat-Zinn, 2012; Marx & Jones, 2017; Napoli, 2004; Pierotti & Remer, 2017). Kabat-Zinn (2012) defined mindfulness using three significant words: intention, attention, and attitude – an individual's purpose of his or her thoughts and his or her approach about it. When individuals gain access to mindfulness and began using its tools consistently, he or she might become more intentional about his or her thoughts.

Mindfulness is the ability to perceive the world transparently without change (Hyland et al., 2015). There are two primary components of mindfulness – self-regulation of attention and nonjudgmental awareness (Jennings, Snowberg, Coccia, & Greenberg, 2011). Mindfulness is an awareness that evolves by intentionally paying attention to the present experience in a nonjudgmental or nonevaluative way (Marx & Jones, 2017; Montero-Marin et al., 2015; Napoli, 2004; Pierotti & Remer, 2017). Nhất Hạnh (1987) proposed that mindfulness shapes attentiveness while creating an internal serenity. Mindfulness moves anxiety out of the way to embrace quietness. Practicing mindfulness helps individuals to be reinvigorated and gain a more extensive, precise understanding of things. Individuals can respond more attentively to all around him or her when using

mindfulness techniques (Marx & Jones, 2017; Napoli, 2004; Nhất Hạnh, 1987; Pierotti & Remer, 2017). Mindfulness is acknowledgment without judgment – one's feelings should be received, accepted, and dealt with on an unquestionably equivalent basis (Marx & Jones, 2017; Napoli, 2004; Nhất Hạnh, 1987; Pierotti & Remer, 2017).

Mindfulness has been regarded as a method for stress reduction, self-awareness, and self-regulation (Jennings et al., 2017; Marianetti & Passmore, 2012; Marx & Jones, 2017). Being a habit of mind, mindfulness has been viewed as a protective factor to prevent high levels of burnout (Piatkowska, 2014; Roeser et al., 2012). Mindfulness can be conceived and measured as both a trait and state (Sutcliffe, Vogus, & Dane, 2016). As a present moment focused state of consciousness, mindfulness helps individuals experience the present in a receptive and nonjudgmental way (Brown & Ryan, 2003; Hülsheger et al., 2013; Napoli, 2004; Pierotti & Remer, 2017; Sutcliffe et al., 2016). Mindfulness is a psychological trait that can be examined by questionnaires and influence the health of human beings (Montero-Marin et al., 2015). The goal of using mindfulness is to focus attention to the present and promote a more accurate and complete understanding of it (Marianetti & Passmore, 2012; Marx & Jones, 2017; Napoli, 2004; Pierotti & Remer, 2017).

Mrazek, Smallwood, and Schooler (2012) suggested that individuals can attend to the present moment without distraction to present experience with the use of mindfulness. The skill of mindfulness can be developed through continuous practice (Kabat-Zinn, 2012). The practice of mindfulness aids in the development of resilience which reciprocates decreasing risks connected with overwhelming and constant stress (Pierotti

& Remer, 2017). Over the past years, there has been a growing curiosity of mindfulness in the setting of Western medical treatments (Sipe & Eisendrath, 2012). Brown and Ryan (2003) contended that mindfulness is a reliable and valid measured characteristic that plays a vital part in promoting wellbeing and mental health.

Mindfulness can be presented at individual and organizational levels (Marianetti & Passmore, 2012). As a positive resolution, mindfulness can contribute to stress management, create a healthy and safe atmosphere, and foster an organizational culture for transformation, scholarship, and development (Aikens et al., 2014; Hyland et al., 2015; Marianetti & Passmore, 2012). For example, the use of mindfulness by one supervisor in an organization can affect the wellbeing and performance of the team ultimately resulting in improvement of the organization's overall performance (Marianetti & Passmore, 2012). Additionally, the organizational members may develop improved communication and a sense of community among the team members (Hyland et al., 2015). The concept of mindfulness has been studied in fields such as medical, clinical, and occupational and has shown a positive influence on an individual's performance (Marianetti & Passmore, 2012). The practice of mindfulness can assist teachers when they meet stressful challenges (Napoli, 2004). The many level phenomenon of mindfulness gives the opportunity for individuals at work to accept and grasp a new truth and create resilience, creativity, and innovation (Choi & Tobias, 2015).

Mindfulness Recent Findings

There are many benefits of teachers using mindfulness tools in their workplace. Two benefits of mindfulness are stress reducer and decrease burnout levels. Stress can

influence a teacher's capability to be receptive and efficient in the classroom. The appearance of stress can be reflected in "time demands, workload, student disruptive behavior, and organizational factors" (Flook et al., 2013, p. 5). Researchers have shown stress reduction as a benefit of the use of mindfulness techniques (Castille, Sawyer, Thoroughgood, & Buckner, 2015; Hülsheger et al., 2013; Jennings et al., 2017; and Yeganeh & Good, 2016). In a study conducted by Piatkowska (2014), the association between mindfulness and burnout was examined with the FFMQ to test the hypothesis of mindfulness being a solution for lower burnout levels. The results indicated that mindfulness could assist as protection against high levels of burnout. Flook et al. (2013) conducted a pilot study of a revised MBSR (Mindfulness Based Stress Reduction) training for elementary school teachers. The FFMQ was used to survey 18 elementary teachers of schools that mainly serve low income and ethnic minority residents to assess the influence of mindfulness training (Flook et al., 2013). Flook et al. (2013) found that mindfulness intervention for teachers will help to alleviate burnout and psychological symptoms, improve teaching behavior influence, and diminish attentional biases (Flook et al., 2013). An intervention method such as mindfulness might be the solution to reduce stress and burnout levels in teachers. The current study adds to this existing knowledge by examining the relationship between mindfulness and resilience as related to burnout in high school teachers.

With consistent use of mindfulness tools, teachers can improve their self-awareness, overall wellbeing, be more attentive to their work, and manage the demands of their work environment. Bernay (2014) conducted a qualitative study using a

hermeneutic phenomenological approach with five teachers to examine the influence of mindfulness towards wellbeing. The teachers were presented with the tool of mindfulness in the beginning stages of their education program (Bernay, 2014). During the first year experiencing mindfulness, the participants reported that he or she saw his or her wellbeing improve, decrease in stress, and more attention was given to his or her lesson plans and students (Bernay, 2014). Bernay (2014) found that presenting mindfulness in teacher education has the potential of improving their wellbeing and job retention. Jennings et al. (2017) examined the success of CARE (Cultivating Awareness and Resilience in Education) program by using a cluster randomized trial design with 224 elementary teachers. CARE is a professional development based on mindfulness techniques (Jennings et al., 2017). Jennings et al. (2017) found that mindfulness is a practice that promotes self-awareness and self-regulation while reducing stress. Jennings et al. designated mindfulness as a tool to assist with the progression of teachers' ability to manage the demands of his or her career. The results of the study by Jennings et al. showed direct positive influence and indicated that CARE is a successful professional tool to increase the quality of classroom interactions. As teachers practice mindfulness, a variety of things will begin to change over time. The direct influence of mindfulness with teachers can reduce job retention by enhancing teachers' wellbeing. The current study examined the use of mindfulness techniques with high school teachers about stress reduction.

The use of mindfulness with teachers can help them improve his or her resilience levels. Researchers have shown that there is a strong connection between mindfulness

and resilience (Kemper et al., 2015; Meiklejohn et al., 2012; Montero-Marin et al., 2015; and Olson et al., 2015). Aikens et al. (2014) conducted a quantitative study to find out if mindfulness in the workplace would decrease stress and improve resiliency and wellbeing. Eighty-nine individuals from Dow Chemical Company were surveyed with the FFMQ (Aikens et al., 2014). The participants were involved in mindfulness intervention that showed mindfulness significantly decreasing perceived stress (Aikens et al., 2014). The group that received the intervention had an increase in mindfulness, resiliency, and vigor (Aikens et al., 2014). Using mindfulness tools helps to improve teacher resilience while decreasing their risk for burnout. Increasing teacher resilience levels is important in alleviating the issue of burnout. With the use of the FFMQ, the current study adds to the existing literature about mindfulness in the workplace by using high school teachers as the population.

Having high conscientiousness levels helps with improving resilience levels and mindfulness. Researchers have shown that there is a positive connection with mindfulness and conscientiousness (Crescentini & Capurso, 2015; Latzman & Masuda, 2013; Lee & Bowen, 2014; and Siegling & Petrides, 2014). De Vibe et al. (2015) collected data before and after a mindfulness intervention to examine if personality traits influenced the use of mindfulness. The FFMQ was used to survey 288 medical and psychology students (De Vibe et al., 2015). De Vibe et al. (2015) found that mindfulness had a significant effect on the participants displaying high conscientiousness and neuroticism scores. The personality trait, conscientiousness, of teachers plays a significant role in increasing his or her mindfulness and resilience levels. The current

study examined the relationship between mindfulness and the personality trait, conscientiousness, among high school teachers.

The previously discussed studies have provided a foundation for mindfulness and its benefits. These studies have shown the interaction of mindfulness with resilience and conscientiousness. The current study adds to the literature by using a standard instrument to measure mindfulness, the FFMQ, to evaluate the effects of mindfulness on teacher resilience as moderated by conscientiousness.

Resilience Historical Overview

A rise in resilience might be attributed to enhancements in an individual's health. Connor and Davidson (2003) and Campbell-Sills and Stein (2007) suggested that resilience is the personal ability that empowers an individual to prosper in the face of adversity and can be used as a measure of practical stress coping ability. Being an essential component of an effective leader, resilience has been found to be viewed as the capacity to bounce back from adverse situations (Connor & Davidson, 2003; Ledesma, 2014). Montero-Marin et al. (2015) proposed that resilience is a dynamic and flexible method of adjustment to life fluctuations that could aid as a protecting factor against psychological distress and mental disorders. During the development of the resilience scale, it was found that resilience is measurable, adjustable, and agrees with higher levels of global improvement (Connor & Davidson, 2003).

Holling (1973) suggested that resilience measures the persistence of organizations and their capacity to take in change and disorder while upholding the same associations. Holling implied that resilience governs the tenacity of relations within an organization

and determines the function in which change can take place, and the organization continues. Walker, Holling, Carpenter, and Kinzig (2004) suggested that resilience is the extent to which organizational members can engage in disorder and regroup while experiencing change and being able to maintain the same structure. With many attributes of resilience, four important components support the definition of resilience. One is latitude, which is the maximum space allowed for change to take place before the ability to recover is lost. Another one, resistance, which is attributed to the level of comfort or struggle that change presents. Precariousness is the point at which recovery might be hard or impossible to take place. The last one, panarchy, is how the previous three attributes are influenced by the dynamics of the organizational members.

Resilience Recent Findings

There is a relationship between resilience and burnout that is connected to mindfulness. Montero-Marin et al. (2015) identified characteristics of burnout as being overworked, no progress, and negligence. Teachers experiencing burnout might feel like they are not meeting the demands of his or her workplace. Intervention approaches addressing mindfulness and resilience can be used to fortify against burnout (Montero-Marin et al., 2015). The use of mindfulness increases resilience and protects individuals from burnout. Olson et al. (2015) tested a theoretical model of factors that could promote resilience and guard burnout among pediatric trainees. Olson et al. (2015) showed that mindfulness was positively related to resilience and inversely related to burnout. In a quantitative study by Gloria, Faulk, and Steinhardt (2013), 267 public school teachers were assessed in his or her adaption to work stress with the Connor-Davidson Scale

which measures resilience. A regression analysis was used to test if positive affect projected success in adjusting to stress – resilience and burnout (Gloria et al., 2013). Gloria et al. (2013) found that excessive stress levels result in burnout in which positive affect and resilience has curative influence. Some teachers adapt efficiently to stressful situations and demonstrate resilience. Teachers that do not show resilience in adverse conditions should use mindfulness to increase their resilience levels.

Resilience promotes wellbeing in individuals. Kemper et al. (2015) suggested that resilience is directly related to less stress, better mental health, more mindfulness, and self-compassion. Resilience showed a strong positive correlation between improved health, more mindfulness and self-compassion, and a negative correlation to stress (Kemper et al., 2015). Resilience and burnout have an adverse relationship. Olson et al. (2015) presented that resilience is inversely related to burnout. And because of the negative association between resilience and stress, resilience can help decrease mental health problems (Ahmed & Julius, 2015). Ahmed and Julius (2015) conducted a quantitative study with an ex-post facto research design of 446 college women in their second year as undergraduates to examine the link between academic performance, resilience, depressions, anxiety, and stress. Mental health issues can be rectified by increasing resilience levels.

There is a significant relationship between mindfulness and resilience. Several quantitative studies showed that resilience and mindfulness have a strong and significant correlation (Kemper et al., 2015; Montero-Marin et al., 2015). Montero-Marin et al. (2015) sought to assess the connection between mindfulness and resilience along with

burnout aspects in 622 Spanish primary care physicians. Montero-Marin et al (2015) found that mindfulness and resilience have a moderately high relationship. In a study conducted by Olson et al. (2015), 45 first year pediatric and medicine-pediatric residents were surveyed with Smith's Brief Resilience Scale to examine the relationship between resilience and burnout. Olson et al. (2015) recommended that burnout is moderated by higher resilience, mindfulness, and self-compassion. The characteristic of mindfulness enables wellbeing and supports the explanation of resilience in individuals.

The previous discussion examined studies to provide a foundation for resilience and its benefits with mindfulness. The current research study adds to this knowledge about the relationship by using the CD-RISC to examine how burnout in teachers is lessened by being more resilience and mindful. Additionally, the current study adds to the literature about mindfulness as a professional development tool for teachers' resilience.

Conscientiousness Historical Overview

Conscientiousness is a dimension of the Five-Factor Model/Big Five Personality Traits (Digman, 1990). Conscientiousness is a thought-provoking factor for those interested in living a lengthy, well, productive, and happy life (Roberts et al., 2014). It was derived from long years of testing and investigation for a unified personality theory (Digman, 1990; Roberts et al., 2014). The scope of the personality characteristics has been examined efficiently by five different investigators in which the investigators came to the same inference that the personality domain could be sufficiently defined by five concepts (Digman, 1990; Roberts et al., 2014).

Conscientiousness is related to many educational achievement measures and attributed to a person's will (Barrick & Mount, 1991; Roberts, Chernyshenko, Stark, & Goldberg, 2005). There are many suggestions about what conscientiousness depicts. For instance, some researchers have suggested that it indicates reliability which is being strategic, accountable, and detailed. Other researchers have proposed that conscientiousness reflects the will of the individual such as being a hard worker, success-focused, and determined (Barrick & Mount, 1991). Costa, McCrae, and Dye (1991) assumed that conscientiousness has features of being both practical and restraint.

Roberts et al. (2005) argued that conscientiousness is the most significant personality trait. Conscientiousness is most noted as a personality trait that identifies the instinctive thoughts, feelings, and behaviors that distinguish individuals from each other (George & Zhou, 2001; Roberts et al., 2005; Roberts et al., 2014). There is a misunderstanding that personality traits are innate, constant and decontextualized; however, Roberts et al. (2014) argued that conscientiousness is natural as well as influenced by environment. Researchers showed that conscientiousness is changeable and can be developed (Roberts et al., 2005; Roberts et al., 2014).

The most common method to measure conscientiousness is through global personality trait self-reports (Barrick & Mount, 1991; Roberts et al., 2014). The assumptions made by researchers for the use of self-report measures are personality trait scores are reflected in many approximations of exact behaviors, the way self-report items are chosen for global personality scales, and self-report measures lack validity (Roberts et al., 2005; Roberts et al., 2014). Roberts et al. (2005) and Roberts et al. (2014) suggested

that conscientiousness measures have been demonstrated to anticipate contextually and task performance. Conscientiousness ratings have shown a positive relationship between long-term career success and healthy lifestyle behaviors. Studies have shown that conscientiousness has analytic and expressive value as well as different meanings of the construct. Barrick & Mount (1991) and George and Zhou (2001) discussed that conscientiousness has a connection to job performance with many professions. Their research shows that the personality trait, conscientiousness, has the firmest and steady relationship with job performance. Making assumptions to take a broad view that high levels of conscientiousness benefit organizations should be cautioned as it is contingent upon the situation and standard variable under consideration (George & Zhou, 2001).

Conscientiousness Recent Findings

There is a strong correlation between the personality trait, conscientiousness, and mindfulness. In a study by Siegling and Petrides (2014), the consistency of mindfulness was investigated by examining the relationship between mindfulness and the five-factor model (FFM). The results of this study demonstrated that conscientiousness has a strong relationship with mindfulness as measured by the FFMQ. Hanley (2016) examined the association between dispositional mindfulness and the FFM in a quantitative study with 458 individuals (primarily individuals) from the college of education subject pool at a university. The results from the bivariate correlation analysis demonstrated that dispositional mindfulness had a significant association with each of the personality traits. The personality trait, conscientiousness, showed the strongest link with mindfulness in comparison with the other personality traits. The current study examined if the

personality trait, conscientiousness, moderated the relationship between mindfulness and resilience in a diverse population, such as high school teachers.

A positive relationship between conscientiousness and mindfulness is not always detected. Lee and Bowen (2014) conducted a study with 63 incarcerated males to examine the association between the facets of mindfulness and the Big Five Personality Traits. Eight-week mindfulness-based training was provided to the imprisoned males and self-reports were used to examine personality, depression, and mindfulness (Lee & Bowen, 2014). Lee & Bowen (2014) used the Toronto Mindfulness Scale (TMS) which has two factors – curiosity and decentering. The TMS does not measure awareness, acceptance, nor nonjudgmental behavior, therefore, measuring mindfulness was limited (Lee & Bowen, 2014). Lee and Bowen (2014) suggested that the conscientiousness and mindfulness association be studied with another mindfulness instrument. The results of this study did not confirm the researcher's hypothesis about a positive association between conscientiousness and mindfulness (Lee & Bowen, 2014). Conversely, the results of a study conducted by Giluk (2009) showed that conscientiousness has a positive, strong connection with mindfulness. Out of the Big Five Personality Traits, conscientiousness is one of the strongest predictors of many work outcomes such as performance. Giluk suggested that conscientiousness should be given more thought in research with mindfulness; especially with research in the workplace (2009). The current study adds to the body of literature about the connection between conscientiousness and mindfulness in the workplace. In the current study, mindfulness was measured by the FFMQ as opposed to the TMS that was used in the study by Lee and Bowen (2014).

Conscientiousness influences the relationship between mindfulness and resilience. De Vibe et al. (2015) investigated if personality factors moderated the effects of using mindfulness. De Vibe et al sought to understand who would get the maximum benefit of mindfulness. Certain traits of individuals help with the use of mindfulness tools. Data were collected before and after intervention for examining personality factors and mindfulness with 288 first and second year medical and psychology students (De Vibe et al., 2015). The results of this study showed that mindfulness had more influence on participants with high scores of the personality traits conscientiousness and neuroticism (De Vibe et al., 2015). Mindfulness is more effective with certain personality traits than others. Sesker et al. (2016) conducted a study with 602 participants from a sample pool to examine if mindfulness and conscientiousness are predictors of coping behavior. They suggested that individuals who are conscientious often seem to be healthier physically and mentally (Sesker et al., 2016). High levels of conscientiousness are related to better stress resilience. Sesker et al. (2016) recommended that more research is needed to expand on conscientiousness and stress resilience. Conscientiousness and mindfulness contribute to coping responses in healthful ways. Therefore, the current study adds to this existing knowledge about the relationship between conscientiousness, mindfulness, and resilience in the workplace.

Summary

Mindfulness is a trait and state (Sutcliffe et al., 2016) where an individual gives their undivided attention to the present moment (Brown et al., 2007; Kabat-Zinn, 2012; Marianetti & Passmore, 2012; Marx & Jones, 2017; Montero-Marin et al., 2015; Mrazek

et al., 2012; Napoli, 2004; Nhất Hạnh, 1987; Pierotti & Remer, 2017; Yeganeh & Good, 2016). The individual does not make any decisions about their experience (Hülsheger et al., 2013; Jennings et al., 2011; Kabat-Zinn, 2012; Marx & Jones, 2017; Montero-Marin et al., 2015; Napoli, 2004; Nhất Hạnh, 1987; Pierotti & Remer, 2017). Practicing mindfulness provides many benefits. Mindfulness allows the individual to increase self-awareness (Jennings et al., 2017), performance (Marianetti & Passmore, 2012; Sutcliffe et al., 2016), wellbeing (Brown & Ryan, 2003; Marianetti & Passmore, 2012; Sutcliffe et al., 2016), resilience (Choi & Tobias, 2015; Pierotti & Remer, 2017) and manage stress (Marianetti & Passmore, 2012; Marx & Jones, 2017; Napoli, 2004; Pierotti & Remer, 2017). The constant theme of mindfulness is described by Jon Kabat-Zinn's implication of the three major areas – intention, attention, and attitude (Kabat-Zinn, 2012).

In this chapter, I reviewed the literature relating to the study of mindfulness techniques on Teacher resilience as moderated by conscientiousness. The review began with discussing the theoretical foundations that shape this study. Then, the primary variables of this study were examined. The next chapter provides details about the method in which this study will be carried out.

Chapter 3: Research Method

Introduction

The purpose of this quantitative, nonexperimental study using multiple regression analysis was to examine the relationship between mindfulness and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderated the relationship between mindfulness and resilience in high school teachers. This chapter provides a discussion of the quantitative methods that were used in this study. The discussion includes the research design and rationale for the selected design, population, data collection, instrumentation validity and reliability, and the analysis of data. The chapter concludes with a discussion of validity threats and ethical considerations.

Research Design and Rationale

This study was quantitative because the goal was to learn about the relationship between variables. This study was a predictive correlational design using multiple regression to examine the effect that conscientiousness has on the relationship between mindfulness and resilience of high school teachers. The predictor variable, mindfulness, was defined as experiencing the now on purpose without putting a name to it or making a decision about it (Kabat-Zinn, 2012). The predictor variable was measured by the FFMQ, which has the following factors: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience (Williams et al., 2014). The outcome variable, resilience, represents the ability to cope with stress in a

successful manner (Campbell-Sills & Stein, 2007). Resilience was measured by the CD-RISC. Conscientiousness was measured by the BFAS: Conscientiousness.

In this correlational study, questionnaires were used to gather data from the sample of the population for this study. Quantitative studies are used to obtain numerical data of a population's attitudes, views, or tendencies by studying a sample from it (Vogt, 2011). I used the multiple correlation coefficient statistics to indicate how the predictor variables (mindfulness) together will predict the outcome variable (resilience). Further, regression coefficients indicate the relationships between each predictor variables and the outcome variable (Stangor, 2011). I chose multiple regression as the most applicable design method because of the multiple predictor variables and moderating variable.

Methodology

Population

The target population for this study was high school teachers. I invited 245 high school teachers from three public schools to participate in this study. According to power analysis, a sample size of 92 was needed to have sufficient power to detect statistical analysis. The sample size was expanded to increase generalizability. Therefore, an estimated sample size of 151 participants was needed for this study.

Sampling and Sampling Procedures

A nonprobability sample was used for the selection process of this study. McBurney and White (2007) suggested that the nonprobability sample is used as a sampling strategy when participants are selected because of their availability and convenience. A power analysis was used to determine the appropriate sample size for this

study. An alpha level of 0.05 was selected with a medium size predictor effect of part r^2 of 0.06 in an overall medium size multiple r^2 .13 (.87) and a power level of 0.89. Stevens (2002) stated,

> if a researcher is going to invest a great amount of time and money in carrying out a study, then he or she would certainly want to have a 70% or 80% chance (i.e., power of .70 or .80) of finding a difference if one is there. (p. 193)

The sample size was calculated using G Power 3.1.9.2 (Faul, Erdfelder, Buchner, & Lang, 2009) for multiple regression. A multiple linear regression analysis with an alpha level of .05, an effect size of .06, and a power of .89 estimated the desired sample size of a total of 151 high school teachers.

Recruitment, Participation, and Data Collection

The recruiting of participants began with contacting each of the schools' administrator to explain the study. A letter of cooperation was e-mailed to each school's administrator to obtain permission to conduct this study at their school. The signed letters of cooperation are attached (Appendix A). Once approval was granted from Walden's IRB to conduct this study, the participating schools were contacted to request permission to provide the study links to the high school teachers on their staff by e-mail.

Once the approval was received from each of the administrators, an e-mail was sent to the high school teachers with the link to complete the survey on Survey Monkey. When the high school teachers clicked on the study link from Survey Monkey, the informed consent information was provided. If they agreed to participate, they were directed to the surveys. There were four surveys provided to the high school teachers to

complete – FFMQ, CD-RISC, BFAS: Conscientiousness, and MBI–Educator Survey. The approximate time for each high school teacher to complete all four surveys was 20 to 30 minutes. Each high school teacher was asked to complete the surveys one time.

Instrumentation

Five-Facet Mindfulness Questionnaire

Baer, Smith, Hopkins, Krietemeyer, and Toney (2006) developed the FFMQ in 2006 to evaluate the facets of mindfulness. The FFMQ is a self-report survey that has 39 items to measure mindfulness (Baer et al., 2008). The developers have permitted the use of the FFMQ for research and teaching (Baer et al., 2006). The FFMQ is a widely used instrument to measure mindfulness (Baer et al., 2008; Lomas et al., 2017; Williams et al., 2014). There are five mindfulness attributes measured with the FFMQ through subscales. These subscales are acting with awareness, describing, observing/noticing, nonreactivity to inner experience, and nonjudging of inner experience (Aikens et al., 2014; Baer et al., 2006; Baer et al., 2008; Williams et al., 2014). The FFMQ was appropriate for use in this study because it measures the five facets of mindfulness. The FFMQ is a commonly used instrument for measuring mindfulness, and it supports the S-ART framework for this study.

The FFMQ is measured using a 5-point Likert scale ranging from (1) *never or very rarely true* to (5) *very often or always true* (Baer et al., 2006). The five factors/facets are combined to produce a total score, which reflects a global measure of mindfulness (Aikens et al., 2014; Baer et al., 2008; Williams et al., 2014). High levels of mindfulness are indicated by a high total score (Williams et al., 2014). The FFMQ was appropriate to

use as a tool to measure the subscales separately (Aguado et al., 2015). In this study, I examined each of the five facets of mindfulness. An example item for each facet of the FFMQ is: *observing* – When I'm walking, I deliberately notice the sensations of my body moving; *describing* – I'm good at finding words to describe my feelings; *acting with awareness* – When I do things, my mind wanders off and I'm easily distracted; *nonjudging of inner experience* – I criticize myself for having irrational or inappropriate emotions; *nonreactivity to inner experience* – I perceive my feelings and emotions without having to react to them.

Per Baer et al. (2008), the FFMQ has adequate reliability, convergent and discriminant validity, and incremental validity in the prediction of psychological symptoms. Williams et al. (2014) found that the FFMQ showed internal consistency where Cronbach's alphas were between .77 and .93, comparable to what Baer et al. (2008) found. The FFMQ would be an appropriate measure of mindfulness with all factors except observing/noticing (Williams et al., 2014). Researchers should be careful about using the FFMQ to measure mindfulness to relate meditator and nonmeditator samples, except the observing/noticing facet, is omitted (Williams et al., 2014).

Aguado et al. (2015), Baer et al. (2008), and de Bruin et al. (2012) provided support to the validity of the most used mindfulness measure, the FFMQ. Aguado et al. examined the dimensionality, reliability, and construct validity of the FFMQ. The reliability was calculated using the omega and omega hierarchical coefficients. The result of the calculation ($\omega = 0.93$) provided support for reviewing each factor of the FFMQ rather than as a single score (Aguado et al., 2015). In this study, I measured the FFMQ

subscales rather than a combined score of each scale. Each factor showed reliability: observing (0.85), describing (0.90), acting with awareness (0.91), nonjudging of inner experience (0.92), and nonjudging to inner experience (0.82). These results were similar to the alpha coefficients in a study conducted by de Bruin et al. (2012) with nonmeditating and meditating samples. Each factor of the FFMQ showed good internal consistency with each sample (nonmeditating sample listed first): observing = .70 and .72; describing = .85 and .86; acting with awareness = .81 and .86; nonjudging of inner experience = .87 and .89; and nonreactivity to inner experience = .71 and .83 (de Bruin et al., 2012). The facets of the FFMQ have adequate internal consistency, construct validity, and predictive validity to evaluate each subscale in the proposed study (de Bruin et al., 2012).

The observing subscale does not appear to be suitable for measuring mindfulness in individuals without meditative experience (Aguado et al., 2015; Baer et al., 2008). Baer et al. (2008) argued that although observing is defined as a fundamental component of mindfulness, it does not fit according to the hierarchical confirmatory factor analysis. The FFMQ should be hypothesized as having different aspects rather than one indicator (Aguado et al., 2015). The FFMQ showed high reliability and construct validity (Aguado et al., 2015) as well as internal consistency, Cronbach's alpha = .80 (Baer et al., 2008).

Decker, Constantine Brown, Ong, and Stiney-Ziskind (2015) and Williams et al. (2014) examined the FFMQ as an instrument used to measure mindfulness. Williams et al. examined the factor structure of the FFMQ with the intention of replicability and showed that the FFMQ is an adequate tool for measuring mindfulness. The FFMQ was

used in a study by Flook et al. (2017) to assess mindfulness' influence with 18 elementary teachers. Jennings et al. (2017) used the FFMQ in a study with 224 elementary teachers to evaluate the success of the Cultivating Awareness and Resilience in Education program. A study to examine the link between mindfulness and burnout used the FFMQ (Piatkowska, 2014). In a study with 288 medical and psychology students, De Vibe et al. (2015) used the FFMQ to examine mindfulness and personality traits. Aikens et al. (2014) sought to find out about mindfulness, stress, resiliency, and wellbeing with 89 participants by using the FFMQ to measure mindfulness.

Connor-Davidson Resilience Scale

Connor and Davidson (2003) developed the CD-RISC in 2003 to evaluate the psychological resilience. The CD-RISC is a self-report survey consisting of 25 items that are administered. Participants will rate how they felt over the previous month (Connor & Davidson, 2003). The developers permitted the use of the CD-RISC for research and teaching (Connor & Davidson, 2003). The CD-RISC was an appropriate measure of resilience for this study because it is an instrument that has research supporting its reliability and validity. The CD-RISC was designed to measure resilience according to the concept of resilience in the same manner as it has been conceptualized for the current study. The CD-RISC has been used in the teacher population to measure resilience, which was the population for this study. The CD-RISC is measured using a 5-point Likert scale ranging from (0) *not true at all* to (4) *true nearly all of the time* (Connor & Davidson, 2003). The CD-RISC total score ranges from 0 to 100; greater resilience is

indicated by higher scores (Connor & Davidson, 2003). An example for the CD-RISC is the following: able to adapt to change.

As a validated instrument in clinical samples as well as the general population, the CD-RISC shows resilience as quantifiable, modifiable, and has comparative validity in contrast to other instruments that measure resilience (Connor & Davidson, 2003). The CD-RISC was used by Aikens et al. (2014) to determine if mindfulness in the workplace would improve resiliency with 89 participants. Gloria et al. (2013) used the CD-RISC with 267 public school teachers to measure resilience in relation to stress levels that caused in burnout. Ahmed and Julius (2015) used the CD-RISC to measure resilience with 446 college women in relation to academic performance, resilience, depression, anxiety, and stress. The psychometric properties of the CD-RISC demonstrate test-retest reliability and good internal consistency showing Cronbach's alpha = .89 (Connor & Davidson, 2003).

Big Five Aspects Scale: Conscientiousness

Goldberg (1999) developed the BFAS: Conscientiousness to measure personality traits based on the Big-Five factor markers from the resources of the International Personality Item Pool (IPIP). The IPIP has good internal consistency (a=0.88), test-retest reliability, and is strongly related to major dimensions of personality assessed by other instruments (Ypofanti et al., 2015). As a self-report survey, the IPIP representation of the Goldberg (1999) Big-Five factor markers consists of 50 or 100 items and can be downloaded free from the Internet for use in research. In this study, I only evaluated the conscientiousness domain, consisting of 20 items.

The BFAS: Conscientiousness was an appropriate measure of conscientiousness for this study because it is based on the original inventory that measures the five personality traits. The BFAS: Conscientiousness is measured using a 5-point Likert scale ranging from very (1) *inaccurate to* (5) *very accurate*. The BFAS: Conscientiousness has been validated as a reliable and valid instrument to measure personality traits (Goldberg et al., 2006; Topolewska, Skimina, Strus, Cieciuch, & Rowiński, 2017). The coefficient alpha for the BFAS: Conscientiousness is .84 for the conscientiousness domain (Goldberg, 1999). The BFAS: Conscientiousness items appear to be in sentence fragment form (e.g., ‘‘Carry out my plans’’). Therefore, “I” was added in the front of each statement to make it easier to read. An example for the BFAS: Conscientiousness is: I carry out my plans.

Maslach Burnout Inventory – Educator Survey

Maslach, Jackson, Leiter, Schaufeli, and Schwab (1981) developed the MBI in 1981 to measure three characteristics of burnout. It was created to measure burnout in different occupations for human services (Maslach, Jackson, & Leiter, 1996). The MBI is a self-report survey that currently has three versions for use (Maslach et al., 1996; Schaufeli et al., 1993). The version of the MBI that was used for this study was Maslach Burnout Inventory - Educator Survey (MBI-ES). Developed by Maslach, Jackson, and Schwab, the MBI-ES considers educational services connected to students (Maslach et al., 1996). The MBI-ES helps with identifying burnout in teachers. The MBI-ES is a widely used instrument to measure burnout and has been used with the teacher population in several studies. The permission for the use of the MBI-ES is granted when purchased

with the administer license that will contain permission, the number of sample items allowed in dissertation appendix, and the copyright statement.

The MBI-ES has 22-items and is measured by a 7-point Likert scale ranging from (1) *never* to (7) *every day* (Maslach et al., 1996). The MBI-ES is used in educational settings that include teachers, administrator, other staff members, and volunteers (Maslach et al., 1996; Most, 2017). Three scales are measured with the MBI-ES – emotional exhaustion, depersonalization, and personal accomplishments (Maslach et al., 1996; Most, 2017; Schaufeli et al., 1993). The MBI-ES does not produce a single score for burnout (Kokkinos, 2006). A high score with emotional exhaustion and depersonalization and low score with personal accomplishment indicates a high level of burnout (Kokkinos, 2006). An example for the MBI-ES is: I feel emotionally drained from my work.

There were two studies with teachers that established the reliability of the MBI-ES. A factor analysis showed a three-factor structure and internal reliability (Maslach et al., 1996). Cronbach alphas were: emotional exhaustion (.90 and .88), depersonalization (.76 and .74), and personal accomplishment (.76 and .72) (Maslach et al., 1996). Maslach, et al. (1996) suggested that the reliabilities of MBI-ES are equivalent to the original MBI. Flook et al. (2013) used the MBI to measure burnout of 18 elementary teachers. Piatkowska (2014) conducted a study with the MBI to understand the connection between mindfulness and burnout. Olson et al. (2015) conducted a cross-sectional study with 45 pediatric and medicine-pediatric residents using the MBI to measure burnout. Gloria et al. (2013) used the MBI with 267 public school teachers to evaluate burnout. Kokkinos

(2006) conducted a study to evaluate the MBI-ES with primary and secondary teachers. There were 771 teachers – 447 primary and 324 secondary. The subscales of the MBI-ES had satisfactory reliabilities. Cronbach alphas were: entire scale (.74), emotional exhaustion (.90), depersonalization (.79), and personal accomplishment (.71).

Data Analysis Plan

I organized the data retrieved from the surveys into an excel spreadsheet. Then, I used the SPSS software program to analyze the data. I used a descriptive analysis described the variables and their distribution (McBurney & White, 2007). The distribution included the mean, standard deviation, and ranges – univariate analysis (McBurney & White, 2007). I conducted data cleaning and screening for this study. With the SPSS software program, I used a frequency of data to detect any missing values in the dataset. I considered surveys that had missing data valid when at least 90% had been completed.

Two research questions guided this study:

RQ1: What is the relationship between using mindfulness techniques and resilience in high school teachers?

$H1_0$: Among high school teachers, mindfulness, as measured by the Five-Facet Mindfulness Questionnaire (FFMQ), does not significantly predict resilience, as measured by the Connor-Davidson Resilience Scale (CD-RISC).

$H1_1$: Among high school teachers, mindfulness, as measured by the FFMQ, significantly predicts resilience, as measured by the CD-RISC.

RQ2: How does conscientiousness moderate the relationship between using mindfulness techniques and resilience in high school teachers?

$H2_0$: Among high school teachers, conscientiousness, as measured by the Big Five Aspects Scale: Conscientiousness (BFAS: Conscientiousness), does not significantly moderate the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

$H2_1$: Among high school teachers, conscientiousness, as measured by the UFFM-I Conscientiousness Scale, significantly moderates the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

I used correlational analysis to test the relationship between mindfulness techniques and resilience in high school teachers. Additionally, I used multiple regression analysis to test the hypothesis of conscientiousness moderating the relationship between using mindfulness techniques and resilience in high school teachers. Multiple regression analysis is recommended for determining how strong the relationship is between variables and the direction of the relationship (Vogt, 2011). The predictor variables of the regression were mindfulness, conscientiousness, and the interaction between mindfulness and conscientiousness. I created the interaction by multiplying mindfulness and conscientiousness together after both had been centered to have a mean of 0. The outcome variable of the regression was resilience. If the interaction showed to be significant, then the moderation relationship is supported. Multiple regression analysis is recommended for determining the proportional amount of each predictor variable to the

total variance (Vogt, 2011). I presented the results of this study in tables along with an interpretation of the results. In the discussion, I included whether there was statistical significance, if the research questions were answered, if the hypotheses were supported, and implications for practice and future research.

Threats to Validity

External validity indicates that the results of a study can generalize to other people or situations (Trochim, 2006). The selection of the participants for this study might not be a representation of the population. The participation in this study was on a volunteer basis which might influenced how they responded to surveys. Therefore, this threatened the findings of this study for making generalizations from sample to the entire population. To limit the degree to which the results can be generalized across populations, the sample can be stratified to make sure an adequate proportion of the population is represented. This study is not a cause-effect experiment and therefore does not have any internal threats (Trochim, 2006).

Ethical Procedures

Before data collection for this study, permission from Walden's IRB was obtained. I obtained a letter of cooperation from each school's administrator to gain access to the potential participants. There were no risks or conflict of interests for participants or stakeholders in relation to this study. To minimize risks and conflict of interest as well as protect participants' and stakeholders' welfare, guidelines were followed.

The data collected for this study have been held with integrity and confidentiality. To ensure that the data collected for this study were treated properly, I organized the data in an excel spreadsheet. I thoroughly checked to ensure that all questions were answered, and responses were completed. I deleted the surveys from Survey Monkey after the data were transferred into the excel spreadsheet. A USB drive has been used to store the collected data for five years. I used a password on the USB to protect the data and placed the USB in a locked file cabinet only accessed by me. After the five-year period has ended, I will erase the data from the USB drive, and use a shredder program to make sure the data is not recoverable. The plan to collect data anonymously was to design the consent and data collection procedures so that identities are completely protected.

Summary

This quantitative study was designed to examine the relationship between mindfulness and resilience in high school teachers. Additionally, the purpose of this study was to examine if conscientiousness moderated the relationship between mindfulness and resilience in high school teachers. In this chapter, I presented information about the research design and rationale for the selected design, population, data collection, instrumentation validity and reliability, analysis of data, validity threats, and ethical considerations. The next chapter provides the data analysis and results from this study will be explained.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to examine the relationship between mindfulness techniques and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderates the relationship between the use of mindfulness techniques and resilience in high school teachers. In this chapter, I discuss the data collection procedures for this study. Then, the descriptive and demographic characteristics of the sample are presented. Next, the results of the data analysis are provided as related to the research questions and hypotheses. There were two research questions that guided this study:

RQ1: What is the relationship between using mindfulness techniques and resilience in high school teachers?

$H1_0$: Among high school teachers, mindfulness, as measured by the FFMQ, does not significantly predict resilience, as measured by the CD-RISC.

$H1_1$: Among high school teachers, mindfulness, as measured by the FFMQ, significantly predicts resilience, as measured by the CD-RISC.

RQ2: How does conscientiousness moderate the relationship between using mindfulness techniques and resilience in high school teachers?

$H2_0$: Among high school teachers, conscientiousness, as measured by the BFAS: Conscientiousness, does not significantly moderate the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

$H2_1$: Among high school teachers, conscientiousness, as measured by the UFFM-I Conscientiousness Scale, significantly moderates the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

This chapter includes the following sections: data collection, results, additional findings, and summary. This section also includes data analysis tables and statistical analysis results.

Data Collection

The relationship between mindfulness techniques and resilience in high school teachers was examined. Additionally, the personality trait, conscientiousness, was examined as a possible moderator to the relationship between mindfulness techniques and resilience. Data were collected using a Likert-type Scale survey from the three high schools. The survey consisted of an online survey that was available through Survey Monkey, an online platform. Data collection took place over a 13-week period. A survey consisting of five parts was assembled: demographic and job-related questions, a measure of mindfulness (FFMQ), a measure of resilience (CD-RISC), a measure of conscientiousness (BFAS: Conscientiousness), and a measure of burnout (MBI-ES). The demographic and job-related questions were developed by me. There was unlimited license access to use the FFMQ, CD-RISC, and BFAS: Conscientiousness. The MBI-ES had to be purchased on a per-user basis from the test publisher (Most, 2017). Three-hundred fifty-eight assessments were purchased for use in this study with the permission

to use the test online. Participants were required to be a high school teacher (Grade 9 to 12).

After receiving approval from IRB (06-21-18-381504), participants were recruited by sending the survey link to three different high school administrators (Appendix A). The e-mail sent to the high school administrators included an explanation of the study, a request asking for voluntary participation in the study, and the link that would connect the high school teacher to the survey using Survey Monkey. The high school administrators provided the study information to the high school teachers on staff. The link was available for high school teachers to visit for 96 days (as of 09/26/18), after which the link was deactivated, and the dataset was compiled. The sample size needed for this study was 151 high school teachers with a confidence level of 95% and a 0.05 alpha level.

A total of 358 people attempted to access the online survey. Of these, 37 did not meet the criteria, and 102 did not consent to the survey. These 139 surveys were removed from the dataset, leaving 219 surveys. The surveys were assessed for completion of at least 90%. Of the 219 surveys, 39 were missing more than 90% of the data and were deleted, leaving 180 surveys. There were 24 surveys that had less than three missing answers and were assigned the average response of all the other participants who completed the survey (grand mean). The data collection process yielded 156 completed surveys from high school teachers. Box plots were conducted, and 22 univariate outliers were detected and removed, leaving 134 surveys. Next, a Mahalanobis Distance Test was

conducted to identify the presence of multivariate outliers, and one multivariate outlier was detected and removed. The final sample size for this study was $N = 133$.

Normality of the criterion variable (resilience) was deemed adequate based on a boxplot and a frequency histogram. Bivariate normality was examined using bivariate scatterplots and Pearson correlations between each of the predictor variables and the criterion variable. All the mindfulness scores and conscientiousness were related to resilience. Independence of errors was not deemed a problem due to the design of the study (each person only completed one survey) and the Durbin-Watson statistics were within normal limits. Multicollinearity was not found based on VIF and tolerance statistics. Regression assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the regression standardized predicted values) were created for all regression models and found homoscedasticity assumptions to have been adequately met. Taken together, along with the generally robust nature of the General Linear Model in larger samples (N = 133) (Vogt, 2011), the assumptions for Pearson correlations and multiple regression were adequately met.

Descriptive and Demographic Statistics

Demographic information was collected from each participant in this study. Table 1 displays the frequency counts for selected variables. The years as a teacher ranged from 1-3 years (12.0%) to 13 years and over (47.4%) with a median of 11 years. The years as a high school teacher ranged from 1-3 years (23.3%) to 13 years and over (33.1%) with a median of 8 years. The years as a high school teacher at current school ranged from 1-3 years (45.1%) to 13 years and over (11.3%) with a median of 8 years. Over half the

teachers who participated in the study taught many grades, which accounted for 51.9% (*n*= 69) of participants. There were 96.2% full-time teachers and 3.8% part-time teachers. Eighty-eight percent (*n*=117) of participants were females, and 12% were males (*n*=16). The age of participants was represented as 18-to 29-years-old (12.8%), 30-to 49-years-old (60.2%), and 50-to 64 (27.1%). The most common racial/ethnic group was Caucasian, 81.2 % (*n*=108) and not of Hispanic, Latino, or Spanish Origin, 89.5% (*n*=119). Most of the teachers had either a bachelor's degree (31.6 %) or master's degree (61.7%). For marital status, the most common categories were married (65.4%) and single, never married (19.5%).

Table 1

Frequency Counts for Selected Variables (N = 133)

Variable	Category	*n*	%
Years as Teacher [a]			
	1-3 years	16	12.0
	4-6 years	20	15.0
	7-9 years	17	12.8
	10-12 years	17	12.8
	13 years and over	63	47.4
Years as High School Teacher [b]			
	1-3 years	31	23.3
	4-6 years	29	21.8
	7-9 years	13	9.8
	10-12 years	16	12.0
	13 years and over	44	33.1

Variable	Category	*n*	%
Years as High School Teacher at Current School [c]			
	1-3 years	60	45.1
	4-6 years	35	26.3
	7-9 years	13	9.8
	10-12 years	10	7.5
	13 years and over	15	11.3
Grade of Students Taught			
	9th	22	16.5
	10th	13	9.8
	11th	13	9.8
	12th	16	12.0
	Many Grades	69	51.9
Current Employment Status			
	Full-time	128	96.2
	Part-time	5	3.8
Highest Level of School Completed, Or Degree Received			
	Associate degree	1	0.8
	Bachelor's degree	42	31.6
	Master's degree	82	61.7
	Professional degree	1	0.8
	Doctorate	7	5.3
Marital Status			
	Single, never married	26	19.5
	Married	87	65.4
	Widowed	3	2.3
	Divorced	17	12.8

Note. [a] Years as a teacher: *Mdn* = 11 years.
[b] Years as a High School Teacher: *Mdn* = 8 years.
[c] Years at Current School: *Mdn* = 5 years.
[d] Age: *Mdn* = 39.50 years.

Table 2 displays the psychometric characteristics for the 11 summated scale scores. The Cronbach alpha reliability coefficients ranged from α= .64 to α= .92 with 10 of the 11 scales having a reliability coefficient of at least α = .78. This suggested that

almost all of the 11 scales used in this study had adequate levels of internal reliability (McBurney & White, 2007).

Table 2

Psychometric Characteristics for Summated Scale Scores (N = 133)

Score	Number of Items	*M*	*SD*	Low	High	Alpha
Total Mindfulness	39	3.53	0.42	2.56	4.46	.91
Observing	8	3.45	0.61	2.00	4.88	.79
Describing	8	3.84	0.61	2.13	5.00	.88
Acting with Awareness	8	3.44	0.63	1.75	5.00	.88
Nonjudging of Inner Experience	8	3.54	0.64	2.38	5.00	.87
Nonreactivity to Inner Experience	7	3.35	0.57	2.00	4.71	.80
Resilience	25	3.11	0.48	1.68	3.92	.92
Conscientiousness	20	3.88	0.52	2.75	5.00	.88
Emotional Exhaustion	9	25.50	11.65	0.00	51.00	.91
Depersonalization	5	5.65	4.55	0.00	17.00	.64
Personal Accomplishment	8	39.95	6.00	26.00	48.00	.78

Results

Data collected from participants' responses to the survey were analyzed using the SPSS software program. Data related to RQ1 on which factors are related to teacher resilience were analyzed using correlation analysis to examine if mindfulness significantly predicts resilience. Data related to RQ2 on if the personality trait, conscientiousness, significantly moderates the relationship between using mindfulness techniques and teacher resilience were analyzed using multiple regression. Data results did not include any outliers. The data were tested to ensure the variables were normally distributed, that nonlinearity does not exist, for high reliability, and for homoscedasticity

to avoid Type I and Type II error (Osborne & Waters, 2002). The computer program SPSS was used to analyze the data collected from the participants in this study. Results were converted from Survey Monkey spreadsheet to data view in SPSS and coded accordingly to relate to the study and variables. The appropriate analysis was performed to obtain each result from the research questions. Due to the multiple analysis performed, a Bonferroni correction was made to reflect alpha levels of less than .033.

RQ1: What is the relationship between using mindfulness techniques and resilience in high school teachers?

$H1_0$: Among high school teachers, mindfulness, as measured by the FFMQ, does not significantly predict resilience, as measured by the CD-RISC.

$H1_1$: Among high school teachers, mindfulness, as measured by the FFMQ, significantly predicts resilience, as measured by the CD-RISC.

To analyze RQ1, Table 3 displays the Pearson intercorrelations among the eight primary study variables. Among the resulting 28 correlations, all but one was significant at the $p < .05$ level. The sizes of the coefficients ranged from $r = .10$ to $r = .73$ with the median sized coefficient to be $r = .42$. The three largest correlations were between total mindfulness with: (a) describing ($r = .72$, $p < .001$); (b) nonjudging of inner experience ($r = .70$, $p < .001$); and (c) nonreactivity to inner experience ($r = .73$, $p < .001$). This combination of findings provided support to reject Null Hypothesis 1 and retain Alternative Hypothesis 1. Specifically, the total mindfulness score, as well as all five facet scores, had significant positive correlations with resilience. All these correlations were significant at the $p < .001$ level.

RQ2: How does conscientiousness moderate the relationship between using mindfulness techniques and resilience in high school teachers?

$H2_0$: Among high school teachers, conscientiousness, as measured by the BFAS: Conscientiousness, does not significantly moderate the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

$H2_1$: Among high school teachers, conscientiousness, as measured by the UFFM-I Conscientiousness Scale, significantly moderates the relationship between using mindfulness techniques, as measured by the FFMQ and resilience, as measured by the CD-RISC.

Table 3

Intercorrelations Among the Primary Study Variables (N = 133)

Scale Score	1		2		3		4	
1. Resilience	1.00							
2. Conscientiousness	.49	****	1.00					
3. Total Mindfulness	.60	****	.42	****	1.00			
4. Observing	.40	****	.10		.64	****	1.00	
5. Describing	.50	****	.24	***	.72	****	.50	****
6. Acting with Awareness	.34	****	.55	****	.67	****	.19	*
7. Nonjudging of Inner Experience	.36	****	.27	***	.70	****	.17	*
8. Nonreactivity to Inner Experience	.49	****	.30	****	.73	****	.37	****

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

Table 3 *Continued*

Scale Score	5		6		7		8
1. Resilience							
2. Conscientiousness							
3. Total Mindfulness							
4. Observing							
5. Describing	1.00						
6. Acting with Awareness	.30	****	1.00				
7. Nonjudging of Inner Experience	.28	****	.46	****	1.00		
8. Nonreactivity to Inner Experience	.43	****	.34	****	.47	****	1.00

Note. * $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

To analyze RQ2, Tables 4-9 display the results of the multiple regression analysis for the relationship between using mindfulness techniques and resilience as moderated by conscientiousness. No multicollinearity was evident based on the Variance Inflation Factors (VIF) in the model. The three assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the regression standardized predicted values) were created for this model and it was found that the assumptions of normality homoscedasticity and linearity were adequately met. Table 4 displays the regression model predicting resilience based on the total mindfulness score moderated by conscientiousness. In the first step, the model was significant ($p = .001$) and accounted for 43.3% of the variance in resilience. The multivariate R value is .658, the R^2 value is .433, and the R^2_{adj} is .424. This model displays a strong relationship in explaining the variance in resilience. This means that 43.3% of the variance as to why the respondents' level of resilience was low, medium, or high is related to the linear combination of the respondents' total mindfulness score and their level of conscientiousness. Both predictors

were positively related to resilience and significant at the $p = .001$ meaning that higher levels of resilience were related to higher total mindfulness and higher conscientiousness scores. The second model added in the interaction effect (the product of the total mindfulness score and the conscientiousness score) but was not significant ($\Delta R^2 = .003$ [$p = .38$]). For Model 2, the multivariate R value is .661, the R^2 value is .437, and the R^2_{adj} is .424. This suggests that conscientiousness, while positively related to resilience, does not act as a moderator of the relationship between resilience and total mindfulness.

Table 4

Predicting Resilience Based on Total Mindfulness Moderated by Conscientiousness

Model	Variable	*B*	*SE*	β	*p*	*VIF*
One						
	Intercept	2.97	0.05		.001	
	Total Mindfulness	0.55	0.08	.49	.001	1.15
	Conscientiousness	0.28	0.07	.29	.001	1.15
Two						
	Intercept	2.98	0.05		.001	
	Total Mindfulness	0.64	0.13	.57	.001	2.93
	Conscientiousness	0.28	0.07	.29	.001	1.16
	Interaction Effect	-0.15	0.16	-.10	.38	2.71

Note. [a] Conscientiousness: 0 = *Low* 1 = *High.*
Note. Model One: F (2, 130) = 49.67, $p = .001$. $R^2 = .433$. $R^2_{adj} = .424$
Note. Model Two: F (3, 129) = 33.33, $p = .001$. $R^2 = .437$. $R^2_{adj} = .424$. $\Delta R^2 = .003$ ($p = .38$)

Table 5 displays the regression model predicting resilience based on the observing score moderated by conscientiousness. No multicollinearity was evident based on the Variance Inflation Factors (VIF) in the model. The three assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the

regression standardized predicted values) were created for this model and it was found that the assumptions of normality homoscedasticity and linearity were adequately met. In the first step, the model was significant ($p = .001$) and accounted for 34.9% of the variance in resilience. The multivariate R value is .591, the R^2 value is .349, and the R^2_{adj} is .339. This model displays a strong relationship in explaining the variance in resilience. This means that 34.9% of the variance as to why the respondents' level of resilience was low, medium, or high is related to the linear combination of the respondents' observing score and their level of conscientiousness. Both predictors were positively related to resilience and significant at the $p = .001$ meaning that higher levels of resilience were related to higher observing scores and higher conscientiousness scores. The second model added in the interaction effect but was not significant ($\Delta R^2 = .004$ [$p = .39$]). For Model 2, the multivariate R value is .594, the R^2 value is .353, and the R^2_{adj} is .338. This suggests that conscientiousness, while positively related to resilience, does not act as a moderator of the relationship between resilience and observing.

Table 5

Predicting Resilience Based on Observing Moderated by Conscientiousness

Model	Variable	*B*	*SE*	β	*p*	*VIF*
One						
	Intercept	2.90	0.05		.001	
	Observing	0.28	0.06	.36	.001	1.01
	Conscientiousness	0.41	0.07	.43	.001	1.01
Two						
	Intercept	2.90	0.05		.001	
	Observing	0.22	0.09	.29	.010	2.38
	Conscientiousness	0.41	0.07	.44	.001	1.01

Interaction Effect	0.10	0.11	.09	.39	2.37

Note a Conscientiousness: 0 = *Low* 1 = *High.*
Note. Model One: F (2, 130) = 34.86, p = .001. R^2 = .349. R^2_{adj} = .339
Note. Model Two: F (3, 129) = 23.44, p = .001. R^2 = .353. R^2_{adj} = .338. Δ R^2 = .004 (p = .39)

Table 6 displays the regression model predicting resilience based on the describing score moderated by conscientiousness. No multicollinearity was evident based on the Variance Inflation Factors (VIF) in the model. The three assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the regression standardized predicted values) were created for this model and it was found that the assumptions of normality homoscedasticity and linearity were adequately met. In the first step, the model was significant (p = .001) and accounted for 38.9% of the variance in resilience. The multivariate R value is .624, the R^2 value is .389, and the R^2_{adj} is .379. This model displays a strong relationship in explaining the variance in resilience. This means that 38.9% of the variance as to why the respondents' level of resilience was low, medium, or high is related to the linear combination of the respondents' describing score and their level of conscientiousness. Both predictors were positively related to resilience and significant at the p = .001 meaning that higher levels of resilience were related to higher describing scores and higher conscientiousness scores. The second model added in the interaction effect but was not significant (Δ R^2 = .000 [p = .98]). For Model 2, the multivariate R value is .624, the R^2 value is .389, and the R^2_{adj} is .375. This suggests that conscientiousness, while positively related to resilience, does not act as a moderator of the relationship between resilience and describing.

Table 6

Predicting Resilience Based on Describing Moderated by Conscientiousness

Model	Variable	*B*	*SE*	β	*p*	*VIF*
One						
	Intercept	2.93	0.05		.001	
	Describing	0.32	0.05	.42	.001	1.05
	Conscientiousness	0.37	0.07	.38	.001	1.05
Two						
	Intercept	2.93	0.05		.001	
	Describing	0.33	0.08	.42	.001	1.99
	Conscientiousness	0.37	0.07	.38	.001	1.05
	Interaction Effect	0.00	0.11	.00	.98	1.95

Note a Conscientiousness: 0 = *Low* 1 = *High.*
Note. Model One: F (2, 130) = 41.35, p = .001. R^2 = .389. R^2_{adj} = .379
Note. Model Two: F (3, 129) = 27.35, p = .001. R^2 = .389. R^2_{adj} = .375. Δ R^2 = .000 (p = .98)

Table 7 displays the regression model predicting resilience based on the acting with awareness score moderated by conscientiousness. No multicollinearity was evident based on the Variance Inflation Factors (VIF) in the model. The three assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the regression standardized predicted values) were created for this model and it was found that the assumptions of normality homoscedasticity and linearity were adequately met. In the first step, the model was significant (p = .001) and accounted for 25.1% of the variance in resilience. The multivariate R value is .501, the R^2 value is .251, and the R^2_{adj} is .240. This model displays a strong relationship in explaining the variance in resilience. This means that 25.1% of the variance as to why the respondents' level of resilience was low, medium, or high is related to the linear combination of the

respondents' acting with awareness score and their level of conscientiousness. Both predictors were positively related to resilience and significant at the $p = .001$ meaning that higher levels of resilience were related to higher acting with awareness scores and higher conscientiousness scores. The second model added in the interaction effect but was not significant ($\Delta R^2 = .003$ [$p = .46$]). For Model 2, the multivariate R value is .504, the R^2 value is .254, and the R^2_{adj} is .237. This suggests that conscientiousness, while positively related to resilience, does not act as a moderator of the relationship between resilience and acting with awareness.

Table 7

Predicting Resilience Based on Acting with Awareness Moderated by Conscientiousness

Model	Variable	*B*	*SE*	β	*p*	*VIF*
One						
	Intercept	2.92	0.05		.001	
	Acting with Awareness	0.14	0.06	.18	.03	1.18
	Conscientiousness	0.38	0.08	.40	.001	1.18
Two						
	Intercept	2.91	0.06		.001	
	Acting with Awareness	0.09	0.09	.12	.33	2.53
	Conscientiousness	0.38	0.08	.40	.001	1.18
	Interaction Effect	0.09	0.13	.09	.46	2.33

Note a Conscientiousness: 0 = *Low* 1 = *High.*
Note. Model One: F (2, 130) = 21.79, $p = .001$. $R^2 = .251$. $R^2_{adj} = .240$
Note. Model Two: F (3, 129) = 14.67, $p = .001$. $R^2 = .254$. $R^2_{adj} = .237$. $\Delta R^2 = .003$ ($p = .46$)

Table 8 displays the regression model predicting resilience based on the nonjudging of inner experience score moderated by conscientiousness. No

multicollinearity was evident based on the Variance Inflation Factors (VIF) in the model. The three assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the regression standardized predicted values) were created for this model and it was found that the assumptions of normality homoscedasticity and linearity were adequately met. In the first step, the model was significant (p = .001) and accounted for 29.1% of the variance in resilience. The multivariate R value is .539, the R^2 value is .291, and the R^2_{adj} is .280. This model displays a strong relationship in explaining the variance in resilience. This means that 29.1% of the variance as to why the respondents' level of resilience was low, medium, or high is related to the linear combination of the respondents' nonjudging of inner experience score and their level of conscientiousness. Both predictors were positively related to resilience and significant at the p = .001 meaning that higher levels of resilience were related to higher nonjudging of inner experience scores and higher conscientiousness scores. The second model added in the interaction effect but was not significant (ΔR^2 = .006 [p = .30]). For Model 2, the multivariate R value is .545, the R^2 value is .297, and the R^2_{adj} is .280. This suggests that conscientiousness, while positively related to resilience, does not act as a moderator of the relationship between resilience and nonjudging of inner experience.

Table 8

Predicting Resilience Based on Nonjudging of Inner Experience Moderated by Conscientiousness

Model	Variable	*B*	*SE*	β	*p*	*VIF*
One						

	Intercept	2.91	0.05		.001	
	Nonjudging of Inner Experience	0.20	0.06	.27	.001	1.05
	Conscientiousness	0.39	0.07	.41	.001	1.05
Two						
	Intercept	2.92	0.05		.001	
	Nonjudging of Inner Experience	0.26	0.08	.35	.002	2.23
	Conscientiousness	0.39	0.07	.41	.001	1.05
	Interaction Effect	-0.12	0.11	-.11	.30	2.18

Note a Conscientiousness: 0 = *Low* 1 = *High.*
Note. Model One: F (2, 130) = 26.63, p = .001. R^2 = .291. R^2_{adj} = .280
Note. Model Two: F (3, 129) = 18.13, p = .001. R^2 = .297. R^2_{adj} = .280. Δ R^2 = .006 (p = .30)

Table 9 displays the regression model predicting resilience based on the nonreactivity to inner experience score moderated by conscientiousness. No multicollinearity was evident based on the Variance Inflation Factors (VIF) in the model. The three assumption plots (residual histogram, residual P-P plots, scatterplot of regression standardized residuals against the regression standardized predicted values) were created for this model and it was found that the assumptions of normality homoscedasticity and linearity were adequately met. In the first step, the model was significant (p = .001) and accounted for 34.3% of the variance in resilience. The multivariate R value is .585, the R^2 value is .343, and the R^2_{adj} is .332. This model displays a strong relationship in explaining the variance in resilience. This means that 34.3% of the variance as to why the respondents' level of resilience was low, medium, or high is related to the linear combination of the respondents' nonreactivity to inner experience score and their level of conscientiousness. Both predictors were positively related to resilience and significant at the p = .001 meaning that higher levels of resilience

were related to higher nonreactivity to inner experience and higher conscientiousness scores. The second model added in the interaction effect but was not significant (ΔR^2 = .001 [p = .59]). For Model 2, the multivariate R value is .587, the R^2 value is .344, and the R^2_{adj} is .329. This suggests that conscientiousness, while positively related to resilience, does not act as a moderator of the relationship between resilience and nonreactivity to inner experience.

Table 9

Predicting Resilience Based on Nonreactivity to Inner Experience Moderated by Conscientiousness

Model	Variable	*B*	*SE*	β	*p*	*VIF*
One						
	Intercept	2.94	0.05		.001	
	Nonreactivity to Inner Experience	0.31	0.06	.37	.001	1.13
	Conscientiousness	0.33	0.07	.35	.001	1.13
Two						
	Intercept	2.94	0.05		.001	
	Nonreactivity to Inner Experience	0.27	0.09	.33	.003	2.32
	Conscientiousness	0.33	0.07	.35	.001	1.13
	Interaction Effect	0.07	0.13	.06	.59	2.19

Note a Conscientiousness: 0 = *Low* 1 = *High.*
Note. Model One: F (2, 130) = 33.87, p = .001. R^2 = .343. R^2_{adj} = .332
Note. Model Two: F (3, 129) = 22.56, p = .001. R^2 = .344. R^2_{adj} = .329. ΔR^2 = .002 (p = .59)

Summary

In summary, I used survey data from 133 teachers to examine the relationship between mindfulness techniques and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderates

the relationship between the use of mindfulness techniques and resilience in high school teachers. The results from RQ1 revealed a significant relationship between mindfulness techniques and resilience in high school teachers. The results indicated a rejection of the Null Hypothesis 1. The results from RQ2 revealed that conscientiousness does not significantly moderate the relationship between mindfulness techniques and resilience in high school teachers. Therefore, the null hypothesis was accepted. In the final chapter, these findings will be compared to the literature, conclusions, and implications will be drawn, and a series of recommendations will be suggested.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was to examine the relationship between mindfulness techniques and resilience in high school teachers. An additional purpose of this study was to examine if the personality trait, conscientiousness, moderates the relationship between the use of mindfulness techniques, and resilience in high school teachers. In this chapter, I discuss the literature, draw conclusions and implications, and make a series of recommendations. This chapter includes a summary of the results of this study by reporting descriptive statistics and the results of the multiple regression analysis.

Burnout is a continuing factor among teachers that need resolution (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; McCarthy et al., 2009; McCormick & Barnett, 2011). The learning environment is essential to the success of education for students. This study was conducted to fill the literature gap of understanding if mindfulness techniques along with high levels of conscientiousness and resilience may help teachers lower the risk of burnout and be better equipped to deal with the demands of their profession. Data were collected using four Likert-type scale surveys distributed to high school teachers at three different schools. Data were analyzed in SPSS using multiple regression. The use of mindfulness techniques was found to significantly predict resilience in high school teachers. The personality trait, conscientiousness, was not found to significantly moderate the relationship between mindfulness techniques and resilience in high school teachers.

This chapter will provide the results presented in Chapter 4 of this study, limitations of this study, recommendations for further research, and implications for positive social change related to this study.

Interpretation of the Findings

This section will include a summary of the results and findings according to each research question.

Research Question 1

To analyze the data for RQ1, correlation analysis was used to examine the relationship between mindfulness techniques and resilience in high school teachers. I found a significant relationship between mindfulness techniques and resilience in high school teachers. Additionally, conscientiousness had significant positive correlations with five of the six mindfulness scores. This present study's findings relative to the relationship between mindfulness and resilience among teachers align with those in the existing literature regarding the relationship between these two factors in the general workplace setting and healthcare environments. The practice of mindfulness helps in developing resilience (Pierotti & Remer, 2017) and provides opportunities for individuals to create resilience (Choi & Tobias, 2015). These outcomes are valuable in increasingly complex and chaotic environments with numerous contradictions (Choi & Tobias, 2015), such as teachers encounter in public high schools.

Using mindfulness practices, teachers can intentionally maintain awareness of their inner experiences while navigating the complexities of the external environment (Pierotti & Remer, 2017), thereby developing resilience that can decrease the risk of

burnout. In addition to reducing burnout risk, another positive implication of resilience is the protection of teachers' personal health and wellbeing. Based on findings from their study of pediatric residents working in a large urban children's hospital, Olson et al. (2015) concluded that mindfulness, which was positively related to higher resilience, contributed to lower burnout among the hospital residents and may also protect their health and wellbeing. Consistent with Olson et al.'s conclusions, the findings from my study have significant implications for teacher professional development, both preservice and in-service. By training preservice and in-service teachers in techniques for developing mindfulness, educators of future teachers and school administrators can address the problem of burnout, which contributes to increased healthcare costs, absenteeism, and turnover rates of teachers (Jennings et al., 2017; Roeser et al., 2012).

Research Question 2

To analyze the data for RQ2, multiple regression analysis was used to test the hypothesis of conscientiousness moderating the relationship between mindfulness techniques and resilience in high school teachers. I found that conscientiousness did not significantly moderate the relationship between mindfulness techniques and resilience in high school teachers. However, De Vibe et al. (2015) found that mindfulness had more influence on those participants with high scores on the personality trait of conscientiousness. One possible explanation for this variance in findings is the different data collection methods used by De Vibe et al., who used a longitudinal approach that entailed collecting data at two intervals, both before and after participants engaged in a mindfulness intervention. In the present study, a cross-sectional design was used whereby

data were collected at one point in time with a self-report questionnaire. Another possible explanation is the variance in findings concerns the studies' different populations and samples. De Vibe et al. gathered data from first- and second-year medical and psychology students, while this present study's sample was high school teachers.

Moreover, this present study's findings differed from those of Sesker et al. (2016) who suggested high levels of conscientiousness are related to better stress resilience. Sesker et al.'s sample was comprised primary of females, while this present study's sample was more diverse, including both male and female participants. Another possible explanation for the differences in findings involves the variables used. This present study used mindfulness, conscientiousness, and resilience as variables, while Sesker et al. used only mindfulness and conscientiousness. The presence of the variable, resilience, in the present study might have affected the findings. This present study's findings relative to RQ2 extend knowledge regarding how conscientiousness moderates the relationship between mindfulness techniques and resilience in high school teachers.

Interpretation of the Findings in Relation to Theoretical Framework

According to the S-ART framework, mindfulness helps in the development of individual's self-awareness, behavior management, and doing things for the benefit of other people (Vago & Silbersweig, 2012). The S-ART framework is a practical way to improve self-awareness about an individual's routine of thought and actions as it relates to other people (Vago, 2014; Vago & Silbersweig, 2012). As applied to this study, the S-ART framework was expected to support that mindfulness predicted resilience levels. The findings of this study supported the theoretical framework of this study, revealing a

positively and significantly relationship between mindfulness techniques and resilience levels. I found that total mindfulness had a moderate relationship with resilience levels. There was only one mindfulness facet (describing) that had a moderate relationship with resilience levels. The other five facets had a weak relationship with resilience levels.

Limitations of the Study

There were several limitations of this study. The generalizability of this study is limited to high school teachers. There is a need to examine the use of mindfulness techniques on teacher resilience as moderated by conscientiousness with all teachers. This study findings did not include all teacher levels. I collected data on a volunteer basis. Therefore, there might be some variation between high school teachers who completed the survey and those who chose not to complete the survey. Any conclusion based on the subscale, depersonalization, should be interpreted with caution.

Recommendations

It is important to continue to examine the mindfulness in the workplace, specifically with teachers to prevent costly teacher turnover rates in schools and reduce burnout among teachers. In a reflection of the findings and limitations of this study, I focused on the high school teacher population. Future research should include all teachers. The theoretical framework for this study was the S-ART framework. Additional research should take into consideration the psychological state of individuals when selecting a framework such as biological (health), social (mentors, support system, group dynamics, organizational culture), and religious (sense of hope).

Research on additional variables as predictors of the relationship between mindfulness and resilience is important for adding to the literature. In this study, the linear relationship of variables was examined. Future studies could examine how variables are related in a nonlinear relationship. The quantitative approach for this study did not take into consideration the subtle differences that are important to teachers. Therefore, options for future studies could include exploring the experiences of high school teachers with mindfulness techniques using a qualitative method.

Implications

The results of this study may be beneficial in creating a positive social, academic environment for students as well as teachers. The learning environment is important to the success of education for students. Roeser et al. (2012) suggested that the teaching profession is in need for "habit of mind" – mindfulness. The teaching profession is more likely to experience burnout if their perspective of demands and the method for dealing with them are not in sync (McCarthy et al., 2009). Developing mindfulness could provide teachers with the tools needed to manage the demands of their profession. Through consistent use of mindfulness techniques, teachers can increase self-awareness, improve their wellbeing and work performance.

Industrial Organizational Practitioners (I-O Practitioners) could encourage the incorporation of specific mindfulness practices in teacher daily practices. Additionally, I-O Practitioners could consider developing a mindfulness toolkit (a list of different mindfulness practices that can be done on a daily basis) that can be utilized by teachers. I-O Practitioners could identify mindfulness practices that can be utilized by both

students and teachers. Those working with teachers should take into mind the stress level experienced on a daily basis. Increasing mindfulness-based interactions may reduce stress level. It may be helpful to work with administration to develop mindfulness-based practice regimens or workshops for school personnel. These regimens or workshops might include information derived from the CARE program. CARE is based on mindfulness techniques that help teachers manage stress and prevent burnout (Jennings et al., 2017). The activities might consist of focused breathing, reflective thinking, and emotional awareness.

As a professional development tool, mindfulness has the potential to help teachers learn how to increase the quality of their classroom interactions. As burnout decreases among teachers, the associated costs with teacher absenteeism, turnover, and health care are likely to reduce. The participants of this study have been given the opportunity to become aware of the role and benefits of mindfulness, the risk of burnout, and their resilience and conscientiousness level. This study will help increase the knowledge of the role of mindfulness in the workplace; specifically, with high school teachers. Additionally, this study will provide a greater awareness of the role of mindfulness with burnout, resilience, and conscientiousness.

There has not been much research about mindfulness with the field of industrial and organizational psychology. Additionally, there is minimal information about the connection between mindfulness and the personality trait, conscientiousness. This research contributes to the growing research about mindfulness in the workplace. Further research should examine and explore helpfulness of mindfulness with elementary and

middle school and compare effectiveness of mindfulness for each group. Additionally, further research should explore which aspects of mindfulness are most helpful to teachers as well as examine mindfulness-based stress reduction and its relationship to teacher resilience.

Conclusion

There is a continuous rise in teacher turnover in the United States. Researchers have shown that the cause of high turnover is burnout (Jennings et al., 2017; Roeser et al., 2012). As a continuing factor, burnout among teachers has a great need for resolution (Flook et al., 2013; McCarthy et al., 2009; McCormick & Barnett, 2011). I examined the relationship between mindfulness techniques and resilience in high school teachers. Additionally, I examined if the personality trait, conscientiousness, moderates the relationship between the use of mindfulness techniques and resilience in high school teachers. In this study, I found a significant relationship between mindfulness techniques and resilience in high school teachers. Furthermore, I discovered that conscientiousness did not significantly moderate the relationship between mindfulness techniques and resilience in high school teachers. Although conscientiousness does not moderate the relationship between mindfulness techniques and resilience in high school teachers, conscientiousness has a positive relationship with resilience.

Mindfulness helps individuals be intentional about being in the present moment. Constant awareness and attentiveness open the door for creating resilience. Mindfulness provides the opportunity for individuals to look at stressful events as challenges versus threats. Mindfulness can help high school teachers create safe, effective, and nurturing

classrooms. The use of mindfulness on a consistent basis creates an opportunity for high school teachers to develop their resilience. Because of high school teachers' resilience development, the risk of burnout decreases. As the risk of burnout decreases, healthcare costs, absenteeism, and turnover rates of teachers can potentially decrease as well.

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Appendix A: Letters of Cooperation

[redacted]

November 9, 2017

Dear Aundrea T. Harris,

Based on my review of your research proposal, I give permission for you to conduct the study entitled *The Effect of Mindfulness Techniques on Teacher Resilience as Moderated by Conscientiousness* within [redacted] As part of this study, I authorize you to facilitate the surveys to our faculty teachers. It is my understanding that a consent form will be provided to participants along with access to complete each survey online. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: access to email database. We reserve the right to withdraw from the study at any time if our circumstances change.

I understand that the student will not be naming our organization in the doctoral project report that is published in Proquest.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

[redacted]

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

[redacted]

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[redacted] [redacted]

November 9, 2017

Dear Aundrea T. Harris,

Based on my review of your research proposal, I give permission for you to conduct the study entitled The Effect of Mindfulness Techniques on Teacher Resilience as Moderated by Conscientiousness within School. As part of this study, I authorize you to facilitate the surveys to our faculty teachers. It is my understanding that a consent form will be provided to participants along with access to complete each survey online. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: access to email database. We reserve the right to withdraw from the study at any time if our circumstances change.

I understand that the student will not be naming our organization in the doctoral project report that is published in Proquest.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.
I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

[redacted]

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

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Appendix B: Big Five Aspects Scale: Conscientiousness (BFAS: Conscientiousness)

Big Five Aspects Scale: Conscientiousness (BFAS: Conscientiousness)
L. R. Goldberg

How Accurately Can You Describe Yourself?

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please rate each of the following statements using the sale provided.

1	2	3	4	5
Very Inaccurate	Moderately Inaccurate	Neither Accurate or Inaccurate	Moderately Accurate	Very Accurate

____ 1. I carry out my plans.
____ 2. I finish what I start.
____ 3. I get things done quickly.
____ 4. I always know what I am doing.
____ 5. I waste my time.
____ 6. I find it difficult to get down to work.
____ 7. I mess things up.
____ 8. I don't put my mind on the task at hand.
____ 9. I postpone decisions.
____ 10. I am easily distracted.
____ 11. I like order.
____ 12. I keep things tidy.
____ 13. I follow a schedule.
____ 14. I want everything to be "just right."
____ 15. I see that rules are observed.
____ 16. I want every detail taken care of.
____ 17. I leave my belongings around.
____ 18. I am not bothered by messy people.
____ 19. I am not bothered by disorder.
____ 20. I dislike routine.

Appendix C: Additional Findings

Tables A1 through A6 displays Pearson correlations for seven demographic variables with selected scale scores. In Table 10, the total mindfulness score was correlated against seven demographic variables. It was found the total mindfulness was positively correlated with years as a teacher ($r = .19$, $p < .05$) and age ($r = .17$, $p < .05$).

Table A1

Correlations for Selected Demographic Variables with Total Mindfulness Scale (N = 133)

Variable	Mindfulness	
Years as Teacher	.19	*
Years as High School Teacher	.16	
Years as High School Teacher at Current School	.03	
Gender	.08	
Age	.17	*
Highest Leve of School Completed, or Degree Received	.13	
Married	-.05	

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

In Table A2, the resilience score was correlated with the same seven demographic variables. It was found that resilience was positively related to years as a teacher ($r = .21$, $p < .05$).

Table A2

Correlations for Selected Demographic Variables with Resilience Scale (N = 133)

Variable	Resilience	
Years as Teacher	.21	*

Years as High School Teacher	.12
Years as High School Teacher at Current School	-.04
Gender	.01
Age	.16
Highest Leve of School Completed, or Degree Received	.11
Married	-.04

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

In Table A3, the conscientiousness score was correlated against the same seven demographic variables. It was found that conscientiousness was positively related to their years as a teacher ($r = .18$, $p < .05$).

Table A3

Correlations for Selected Demographic Variables with Conscientiousness Scale (N = 133)

Variable	Conscientiousness
Years as Teacher	.18 *
Years as High School Teacher	.16
Years as High School Teacher at Current School	.03
Gender	-.02
Age	.08
Highest Leve of School Completed, or Degree Received	.11
Married	-.09

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

In Table A4, the emotional exhaustion scale score was correlated against the seven demographic variables. None of the seven correlations were significant at the $p < .05$ level.

Table A4

Correlations for Selected Demographic Variables with Emotional Exhaustion Scale (N = 133)

Variable	Emotional Exhaustion
Years as Teacher	-.02
Years as High School Teacher	-.03
Years as High School Teacher at Current School	-.02
Gender	-.14
Age	-.06
Highest Leve of School Completed, or Degree Received	.09
Married	-.12

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

In Table A5, the depersonalization scale score was correlated against the seven demographic variables. None of the seven correlations were significant at the $p < .05$ level.

Table A5

Correlations for Selected Demographic Variables with Depersonalization Scale (N = 133)

Variable	Depersonalization
Years as Teacher	-.08
Years as High School Teacher	-.12
Years as High School Teacher at Current School	.01
Gender	.09
Age	-.11
Highest Leve of School Completed, or Degree Received	.06
Married	-.13

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

In Table A6, the personal accomplishment scale score was correlated against the seven demographic variables. None of the seven correlations were significant at the $p < .05$ level.

Table A6

Correlations for Selected Demographic Variables with Personal Accomplishment Scale (N = 133)

Variable	Personal Accomplishment
Years as Teacher	-.07
Years as High School Teacher	-.02
Years as High School Teacher at Current School	-.04
Gender	-.00
Age	-.01
Highest Leve of School Completed, or Degree Received	-.09
Married	.07

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.